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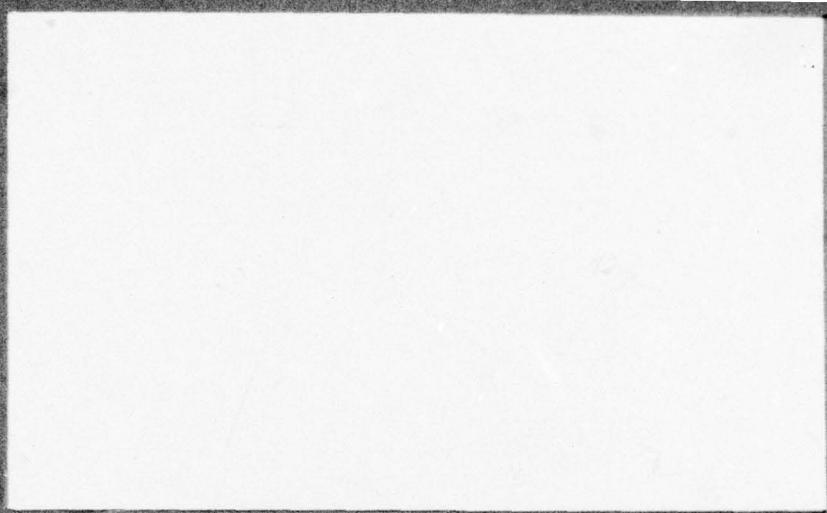
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DATA REPORT FOR A TEST PROGRAM TO STUDY TRANSONIC FLOW FIELDS A--ETC(U)  
JUL 77 S C PERKINS, S S STAHLER, M J HEMSCHE F44620-75-C-0047  
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) A test program was conducted to obtain measurements of flow velocities and static pressures in the vicinity of wing-body-store model (representative of a fighter-type aircraft) as well as surface pressures, forces, and moments on the model. Flow velocities and static pressures were also measured near the tunnel walls to provide outer flow field information. This report presents the data obtained during the test program conducted in the 4T and 16T Wind Tunnels at Arnold Engineering Development Center. The Flow-field data were obtained at Mach numbers 0.925, 0.975, and 1.025 and constitute the major part of the data. (cont)														

Volume I is a summary report which gives detailed information on the test program and presents uncertainties associated with the various types of data taken in the 4T Wind Tunnel. The volume also presents tunnel-empty and Mach-number surveys, as well as tabulated force and moment and pressure data for the Mach number range 0.80 to 1.15 and angles of attack -2°, -5°, 0°, 2°, and 5°. Volumes II, III, and IV present the tabulated flowfield data for the 4-percent thick wing model at Mach numbers 0.925, 0.975 and 1.025, respectively. Volume V presents the tabulated flow-field data for the 6-percent thick wing model, and Volume VI presents data obtained for the 4-percent thick wing model in the 16T Wind Tunnel.

DATA REPORT FOR A TEST PROGRAM TO STUDY  
TRANSONIC FLOW FIELDS ABOUT AIRCRAFT  
WITH APPLICATION TO EXTERNAL STORES

VOLUME VI.- 16T WIND TUNNEL TESTS

By Stanley C. Perkins, Jr.,  
Stephen S. Stahara and  
Michael J. Hemsch

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## NOMENCLATURE

This section provides a list of symbols which identify various aerodynamic parameters, axis designations, subscripts, and tabulated data nomenclature.

### SYMBOLS

$A_w$	planform area of both wings (does not include body), 0.4444 ft <sup>2</sup>
$A_{AL}$	local upwash angle, deg; $\tan^{-1} (\frac{WL/VM}{UL/VM})$
$b$	wing span, 16 in.
$c$	reference length for pitching moment, 5.3444 in.
$C_A$	axial force coefficient, axial force/ $q_\infty A_w$
$C_{LL}$	rolling-moment coefficient, rolling moment/ $q_\infty A_w b$
$C_{LM}$	pitching-moment coefficient, pitching moment/ $q_\infty A_w c$
$C_{LN}$	yawing-moment coefficient, yawing moment/ $q_\infty A_w b$
$C_N$	normal-force coefficient, normal force/ $q_\infty A_w$
$C_p$	local pressure coefficient, $(p_l - p)/q_\infty$
$C_y$	side-force coefficient, side force/ $q_\infty A_w$
$CPS$	model surface pressure coefficient, $(PS - P)/Q$
$M$	Mach number
$p, P$	free-stream static pressure, psfa
$PS$	model local surface pressure, psfa
$q$	dynamic pressure, $\frac{1}{2} \rho V^2$ ; psfa
$r$	radius of the body, in.
$Re/ft$	free-stream Reynolds number per foot, ft <sup>-1</sup>
$SWL$	local sidewash angle, deg; $\tan^{-1} (\frac{VL/VM}{UL/VM})$
$UL, VL, WL$	local velocity components, positive along the positive X, Y, and Z directions; respectively, ft/sec
$v$	total velocity, ft/sec
$VM$	free-stream velocity, ft/sec

## NOMENCLATURE (Continued)

X,Y,Z	body-fixed Cartesian coordinates with origin coincident with the aircraft model nose at all angles of attack, see figure 5(a)
XT,YT,ZT	tunnel-fixed Cartesian coordinates with origin coincident with the aircraft model nose at zero angle of attack, see figure 5(b)
$\alpha$	angle of attack of the model, deg; angle between body axis and tunnel axis, as defined in figure 5
$\alpha_{\text{probe}}$	angle of attack of probe, angle between probe axis and tunnel axis
$\theta$	azimuthal angle in the Y-Z plane, deg; measured from the positive Y axis as shown in figure 5
$\rho$	mass density, slugs/ft <sup>3</sup>

### Subscripts

$\infty$	free-stream conditions
$l$	local conditions

### Force and Moment and Pressure Data Tabulations

$A_b$	area of model base, .038785 ft <sup>2</sup>
$A_W$	planform area of both wings (does not include body), .4444 ft <sup>2</sup>
ALFWM	model angle of attack, positive nose up as seen by the pilot (nose down in the tunnel), deg.
b	wing span, 16 in.
c	reference length for pitching moment, 5.3444 in.
CA	axial-force coefficient measured by balance, in body coordinates, axial force/QA <sub>W</sub>
CAB	base axial-force coefficient in body coordinates, $(P - \bar{P}_b)A_b/QA_W$
CAF	axial-force coefficient corrected for base effects, in body coordinates, CA-CAB

### NOMENCLATURE (Continued)

CLL	rolling-moment coefficient in unrolled body coordinates, rolling moment/ $QA_W b$
CLM	pitching-moment coefficient in unrolled body coordinates, pitching moment/ $QA_W \bar{c}$
CLN	yawing-moment coefficient in unrolled body coordinates, yawing moment/ $QA_W b$
CN	normal-force coefficient in unrolled body coordinates, normal force/ $QA_W$
CPS N (N = 1,25)	model surface-pressure coefficients at orifice number N, $(PS - P)/Q$
CY	side-force coefficient in unrolled body coordinates, side force/ $QA_W$
M	free-stream Mach number
P	free-stream static pressure, psfa
$\bar{P}_b$	average base pressure, psfa
PART	test part number
PS	model local surface pressure, psfa
PT	free-stream total pressure, psfa
Q	free-stream dynamic pressure, psfa
$REX10^{-6}$	free-stream unit Reynolds number, 1/ft
RUN	run number
SURVEY	survey number
TT	stagnation chamber total temperature, °F
VM	free-stream velocity, ft/sec
WING	wing type

#### Tunnel Empty Survey Data Tabulations

AATL	local upwash angle in tunnel-axis coordinates, deg; $\tan^{-1} (WT/VT)$
ALFBM	model angle of attack, deg
CPL	local pressure coefficient, $(PS - P)/Q$

NOMENCLATURE (Continued)

GP	grid point number
M	free-stream Mach number
ML	local Mach number
P	tunnel free-stream static pressure, psfa
PART	test part number
POINT	part point number
PS	local static pressure, psfa
PT	stagnation tunnel chamber pressure, primary, psfa
PTL/PT	ratio of probe stagnation pressure to tunnel chamber stagnation pressure
Q	free-stream dynamic pressure, psfa
$REX10^{-6}$	free-stream unit Reynolds number, 1/ft
RUN	run number
SURVEY	survey number
SWTL	local sidewash angle in tunnel-axis coordinates, deg; $\tan^{-1}$ (VT/UT)
TEST	test number
TT	stagnation chamber total temperature, primary, °F
UT/VM	ratio of velocity component in the tunnel-axis X direction to tunnel free-stream velocity
VM	tunnel free-stream velocity, ft/sec
VT/VM	ratio of velocity component in the tunnel-axis Y direction to tunnel free-stream velocity
VTL/VM	ratio of local velocity vector in tunnel-axis system to free-stream velocity vector
WING	wing type
WT/VM	ratio of velocity component in the tunnel-axis Z direction to tunnel free-stream velocity
XT	location of the probe in the tunnel-axis X direction
YT	location of the probe in the tunnel-axis Y direction
ZT	location of the probe in the tunnel-axis Z direction

Flow-Field Survey Data Tabulations

AAL	local upwash angle in body-axis coordinates, deg; $\tan^{-1}$ (WL/UL)
-----	--

## NOMENCLATURE (Continued)

AATL	local upwash angle in tunnel-axis coordinates, deg; $\tan^{-1}$ (WT/UT)
ALFBM	model angle of attack, deg
CPL	local pressure coefficient, $(PS - P)/Q$
GP	grid point number
M	free-stream Mach number
ML	local Mach number
P	tunnel free-stream static pressure, psfa
PART	test part number
POINT	part point number
PS	local static pressure, psfa
PT	stagnation tunnel chamber pressure, primary, psfa
PTL/PT	ratio of probe stagnation pressure to tunnel chamber stagnation pressure
Q	free-stream dynamic pressure, psfa
REX10 <sup>-6</sup>	free-stream unit Reynolds number, 1/ft
RUN	run number
SURVEY	survey number
SWL	local sidewash angle in body-axis coordinates, deg; $\tan^{-1}$ (VL/UL)
SWTL	local sidewash angle in tunnel-axis coordinates, deg; $\tan^{-1}$ (VT/UT)
TEST	test number
TT	stagnation chamber total temperature, primary °F
UL/VM	ratio of probe X axis local velocity component to tunnel free-stream velocity
UT/VM	ratio of velocity component in the tunnel-axis X direction to tunnel free-stream velocity
VM	tunnel free-stream velocity, ft/sec
VML/VM	ratio of local velocity vector in the body-axis system to free-stream velocity vector
VL/VM	ratio of probe Y axis local velocity component to tunnel free-stream velocity

### NOMENCLATURE (Concluded)

VT/VM	ratio of velocity component in the tunnel-axis Y direction to tunnel free-stream velocity
VTL/VM	ratio of local velocity vector in the tunnel-axis system to free-stream velocity vector
WING	wing type
WL/VM	ratio of velocity component in the tunnel-axis Z direction to tunnel free-stream velocity
WT/VM	ratio of probe Z axis local velocity component to tunnel free-stream velocity
X	location of the probe in the body-axis X direction
XT	location of the probe in the tunnel-axis X direction
Y	location of the probe in the body-axis Y direction
YT	location of the probe in the tunnel-axis Y direction
Z	location of the probe in the body-axis Z direction
ZT	location of the probe in the tunnel-axis Z direction

DATA REPORT FOR A TEST PROGRAM TO STUDY  
TRANSONIC FLOW FIELDS ABOUT AIRCRAFT  
WITH APPLICATION TO EXTERNAL STORES

VOLUME VI. - 16T WIND TUNNEL TESTS

1. INTRODUCTION

This volume of the data report presents the data obtained in the 16T Wind Tunnel at Arnold Engineering and Development Center. Tunnel-empty survey data and flow-field survey data are presented for  $M_\infty = 0.925, 0.975$ , and  $1.025$  and force and moment and pressure data are presented at  $M_\infty = 0.80, 0.85, 0.90, 0.925, 0.95, 0.975, 1.0, 1.025, 1.05, 1.10$  and  $1.15$ . All tests are for the 4-percent thick wing-body model and were performed at a nominal Reynolds number per foot of  $3.0 \times 10^6$ . These tests are outlined in Tables I through VI of this volume. The tabulated data are at the end of this volume beginning on page number 1.

2. DESCRIPTION OF TESTS

The details of the test hardware and coordinate systems, as well as an overview of the purpose and scope of the test program, are provided in Volume I of this data report. The purpose of the 16T tests is to study the effects of wall interference by comparing data obtained in the 4T and 16T tests. Figure 1 of this volume shows the entire grid layout used for the inner flow-field measurements. The general grid layout used for the outer flow-field measurements is shown in figure 2. Some layouts use only a portion of these patterns, depending on Mach number and angle of attack. The grid layout is designed to give outer flow-field data at a constant radial distance from the tunnel centerline for various values of  $\theta$ , the azimuthal angle, as shown in figure 3. A sketch of the wing-body combination is shown in figure 4. Figure 5 shows the 4-percent wing-body combination in the 16T Tunnel with the conical flow-field probe supported on the captive trajectory system (CTS).

The 16T tests are summarized in Table I. Columns one through

three indicate the table number, the type of test data presented (tunnel-empty survey, force and moment and pressure or flow-field survey), and the page numbers, respectively, for each set of data.

### 2.1 Tunnel-Empty Surveys

Table II contains the test condition grids for the tunnel-empty surveys. Columns one and two of these tests indicate the page number and part number, respectively, of the tabulated data. Columns four through seven indicate the Mach number, the initial and final positions and the incremental change in the axial coordinate, the tunnel-axis X direction, of the probe static-pressure orifices. Columns nine and ten indicate the lateral and vertical positions, the tunnel-axis Y and Z directions, respectively, of the probe longitudinal centerline.

### 2.2 Force and Moment and Pressure Distribution Tests

Table III contains the test condition grids for the force and moment and pressure distribution tests. Columns one and two of these tests indicate the page number and part number, respectively, of the tabulated data. Columns four and six of the force and moment and pressure tests indicate the Mach number and type of data given on each page; F & M indicates force and moment data and P indicates pressure data.

### 2.3 Flow-Field Survey Tests

Tables IV through VI contain the test condition grids for the flow-field survey tests at  $M_\infty = 0.925, 0.975$ , and  $1.025$ , respectively. Columns one and two of these tests indicate the page number and part number, respectively, of the tabulated data. Columns four through seven of the flow-field survey tests indicate the angle of attack, the initial and final positions and incremental change in the axial coordinate, the body-axis X

direction, of the probe static-pressure orifices. Columns nine and ten indicate the lateral and vertical coordinates, the body-axis Y and Z directions, respectively, of the probe longitudinal centerline. These coordinates indicate the various inner flow-field surveys. The outer flow-field surveys follow the inner flow-field surveys. Columns five, six and seven of these surveys indicate the initial and final positions and incremental change, respectively, of the axial coordinate, the tunnel-axis X direction, of the probe static-pressure orifices. Columns nine and ten indicate the lateral and vertical coordinates, the tunnel-axis Y and Z directions, respectively, of the probe longitudinal centerline.

### 3. DESCRIPTION OF DATA

This section presents a description of the tunnel-empty survey data, force and moment and pressure data, and flow-field survey data obtained in the 16T Wind Tunnel. These tests were conducted with the 4-percent thick wing-body model at a nominal Reynolds number per foot of  $3.0 \times 10^6$ .

#### 3.1 Tunnel-Empty Surveys

The tunnel-empty survey data are presented in tabular form on pages 1 through 10 at the end of this volume. The heading on each page contains the test number, the part number, the Reynolds number per foot, the angle of attack of the model, the type of wing attached to the model (no wing for tunnel-empty surveys), and the Y and Z (or YT and ZT) coordinates at which the X (or XT) traverse is carried out. Also included are the run and survey numbers and the date on which data were recorded.

Below the heading information are the tunnel-empty survey data obtained during each test. Column one indicates the sequential indexing number for referencing data obtained during

one part (POINT). Column two indicates the grid point number and column three indicates the location of the probe static-pressure orifices in the tunnel-axis X direction (XT). Columns four through eight indicate wind tunnel free-stream quantities. These are Mach number (M), velocity (VM, ft/sec), total pressure (PT, psfa), dynamic pressure (Q, psfa), and total temperature (TT, °F). Columns nine through seventeen indicate local quantities which were either measured by the probe or calculated from probe measurements. Columns nine through twelve contain the local Mach number (ML), the ratio of local to free-stream velocity (VTL/VM), the ratio of local to free-stream total pressure (PTL/PT), and the local pressure coefficient (CPL). Columns thirteen through seventeen contain the ratio of local velocity components in the tunnel-axis X, Y, and Z directions, respectively, to the free-stream velocity (UT/VM, VT/VM, and WT/VM, respectively) and the local upwash and sidewash angles (AATL and SWTL, respectively) referenced to tunnel-axis coordinates.

### 3.2 Force and Moment and Pressure Distribution Data

The force and moment and pressure data are presented in tabular form on pages 11 through 32 at the end of this volume.

Each Mach number has two pages of data associated with it. The first page contains force and moment data and the second contains pressure data. The heading on both pages is identical and contains the test number, the part number, the free-stream Mach number (M), total pressure (PT, psfa), static pressure (P, psfa), Reynolds number per foot ( $RE \times 10^{-6}$ , ft<sup>-1</sup>), velocity (VM, ft/sec), dynamic pressure (Q, psfa), and stagnation chamber total temperature (TT, °F). Also included are wing type (4-percent thick for these tests), the run and survey numbers, and the date on which the data were recorded.

Below the heading on the first page of each Mach number section are the data obtained during each force and moment test.

The results for the force and moment tests include the model angle of attack (ALFWM), the normal-force coefficient (CN), side-force coefficient (CY), axial-force coefficient (CA), pitching-moment coefficient (CLM), yawing-moment coefficient (CLN), rolling-moment coefficient (CLL), axial-force coefficient corrected for base effects (CAF), and base axial-force coefficient (CAB). The positive sense of these forces and moments is shown in figure 6.

Below the heading on the second page of each Mach number section are the data obtained during each pressure test. Column one indicates the orifice at which the pressure coefficient was measured. Columns two through six indicate the pressure coefficient at  $\alpha = -5^\circ, -2^\circ, 0^\circ, 2^\circ$ , and  $5^\circ$ , respectively, at each orifice location. The locations of the pressure orifices are shown in figure 4.

### 3.3 Flow-Field Survey Tests

The flow-field survey data at Mach numbers 0.925, 0.975 and 1.025 are presented in tabular form on pages 33 through 70 at the end of this volume. The heading on each page contains the test number, the part number, the Reynolds number per foot, the angle of attack of the model, the type of wing attached to the model (4-percent thick for this volume), and the Y and Z (or YT or ZT) coordinates at which the X (or XT) traverse is carried out. Also included are the run and survey numbers and the date on which data were recorded.

Below the heading information are the flow-field survey data obtained during each test. Columns one and two indicate the sequential indexing number for referencing data obtained during one part (POINT) and the grid point number, respectively. Column three indicates the location of the probe static-pressure orifices in the body-axis direction (X) for the inner flow-field surveys or in the tunnel-axis direction (XT) for the outer flow-field surveys. Columns four through eight indicate wind tunnel

free-stream quantities. These are Mach number (M), velocity (VM, ft/sec), total pressure (PT, psfa), dynamic pressure (Q, psfa), and total temperature (TT, °F). Columns nine through seventeen indicate local quantities which were either measured by the probe or calculated from probe measurements. Columns nine through twelve contain the local Mach number (ML), the ratio of local to free-stream velocity (VML/VM or VTL/VM), the ratio of local to free-stream total pressure (PTL/PT), and the local pressure coefficient (CPL). For the inner flow-field surveys, columns thirteen through seventeen contain the ratio of local velocity components in the body-axis X, Y, and Z directions, respectively, to the free-stream velocity (UL/VM, VL/VM, and WL/VM, respectively) and the local upwash and sidewash angles (AAL and SWL, respectively) referenced to body-axis coordinates. For the outer flow-field surveys, columns thirteen through seventeen contain these same local quantities as determined in the tunnel-axis system. The positive sense of the velocity components is along the positive X, Y, and Z directions. A positive local upwash angle indicates downward flow away from the wing-body combination, the positive Z or ZT direction, see figure 7. A positive local sidewash angle indicates flow along the positive Y or YT axis, see figure 7.

#### 4. DATA UNCERTAINTIES

Uncertainties in the aerodynamic coefficients, local conditions, flow angles, and probe position for the 16T Wind Tunnel were provided by ARO and are presented in Table VII.

The uncertainties in probe positions were particularly difficult to obtain. The values given in Table VII are estimates only. An optical test for one probe position was conducted with the wind on and with the wind off. For these tests, a reflective band was painted on the model body aft of the trailing edge of the wing. The Z-position of the probe in the Y = 0 plane was

measured optically and compared with the nominal (requested) and computed (tabulated) values. For the wind-off cases, an additional check was made by hand using a ruler. Some typical results are given in Table VIII. For all the calibration tests made, the tabulated probe positions were more accurate for the  $\alpha = -5^\circ$  cases than for the  $\alpha = +5^\circ$  cases.

It is noted here that the center of rotation for pitch in the 16T tunnel was located a considerable distance behind the base of the model. Consequently, the wing-body combination at angle of attack was displaced from its tunnel position at  $\alpha = 0^\circ$ . At  $\alpha = 0^\circ$ , the nose was located at  $X = 0, Z = 0$  and was 3.75 inches below the tunnel centerline. For  $\alpha = -5^\circ$ , the nose was at  $X = .385, Z = -8.53$ , while at  $\alpha = +5^\circ$ , the nose was located at  $X = .513, Z = 11.52$ . Such a change in model position with respect to the tunnel centerline for various angles of attack could have an effect on the results obtained for these angles of attack.

#### REFERENCES

1. Reichenau, D. E.: AFFDL Wing-Body Flow-Field Study Test. PWT 16T Facility Project Criteria, Project No. P41T-M4A, Test No. TF-445, Mar. 10, 1977.

TABLE I. - SUMMARY OF  
TABULATED DATA IN VOLUME VI

$$Re/ft = 3.0 \times 10^6$$

Table (1)	Test (2)	Pages (3)
II	Tunnel-Empty Surveys	1 - 10
III	Force and Moment and Pressure Tests	11 - 32
IV	Flow-Field Surveys At $M_\infty = 0.925$	33 - 45
V	Flow-Field Surveys At $M_\infty = 0.975$	45 - 57
VI	Flow-Field Surveys At $M_\infty = 1.025$	58 - 70

TABLE II. - TUNNEL-EMPTY SURVEYS

1	2	3	4	5	6	7	8	9	10
Page No.	Part No.		Mach No.	Initial XT inches	Final XT inches	$\Delta$ XT inches		YT inches	ZT inches
1	102		.925	-6.0	24.0	2.0		0.0	-14.2
2	103			-40.0					0.0
3	104			-6.0				14.1	
4	106							0.0	8.3
5	97		.975	-6.0	24.0	2.0		0.0	-14.2
6	96			-42.0				0.0	0.0
7	98			-6.0				14.1	0.0
8	101		1.025	-6.0	24.0	2.0		0.0	-14.2
9	100			-40.0				0.0	0.0
10	99			-6.0				14.1	0.0

TABLE III. - FORCE AND MOMENT AND PRESSURE TESTS

1	2	3	4	5	6	7	8	9	10
Page No.	Part No.		Mach No.		Type of Data				
11	9		.800		F & M				
12		▼		▼	P				
13	10		.850		F & M				
14		▼		▼	P				
15	11		.900		F & M				
16		▼		▼	P				
17	12		.923		F & M				
18		▼		▼	P				
19	13		.950		F & M				
20		▼		▼	P				
21	14		.974		F & M				
22		▼		▼	P				
23	15		1.001		F & M				
24		▼		▼	P				
25	16		1.025		F & M				
26		▼		▼	P				
27	17		1.051		F & M				
28		▼		▼	P				
29	18		1.100		F & M				
30		▼		▼	P				
31	19		1.151		F & M				
32		▼		▼	P				

TABLE IV. - FLOW-FIELD SURVEYS AT  $M_{\infty} = 0.925$ 

1	2	3	4	5	6	7	8	9	10
Page No.	Part No.	Angle of Attack, degrees	Initial X inches	Final X inches	$\Delta X$ inches			Y inches	Z inches
33	59	0.0	10.0	19.0	.33			4.0	-1.0
34	77	5.0	11.0						-.9
35	92	-5.1							-1.1
36	62	0.0			1.33			-4.0	-1.0
			Initial XT inches	Final XT inches	$\Delta XT$ inches			YT inches	ZT inches
37, 38	44, 45	0.0	-5.8	24.0	.50			0.0	-14.2
39, 40	57, 58		-5.4					14.2	0.0
* 41, 42	72, 73	5.0	-5.0					0.0	-14.0
43	78				1.00				-13.2
44	84							14.2	0.0
45	91		-5.0	-6.0				0.0	-14.1

\*  $\alpha_{\text{probe}} = 5^{\circ}$  for parts 72 and 73

TABLE V.- FLOW-FIELD SURVEYS AT  $M_{\infty} = 0.975$ 

1	2	3	4	5	6	7	8	9	10
Page No.	Part No.		Angle of Attack, degrees	Initial X inches	Final X inches	$\Delta X$ inches		Y inches	Z inches
46	60		0.0	11.0	19.0	.33		4.0	-1.0
47	76		5.0						-.9
48	87		-5.1						-1.1
49	61		0.0			1.33		-4.0	-1.0
				Initial XT inches	Final XT inches	$\Delta XT$ inches		YT inches	ZT inches
50, 51	46, 47		0.0	-5.8	24.0	.50		0.0	-14.2
52	56			-5.4				14.2	0.0
* 53, 54	74, 75		5.0					0.0	-14.1
55	79			-5.0		1.00			-13.2
56	83							14.2	0.0
57	85		-5.1					0.0	-14.1

\*  $\alpha_{\text{probe}} = 5^{\circ}$  for parts 74 and 75

TABLE VI. - FLOW-FIELD SURVEYS AT  $M_{\infty} = 1.025$ 

1	2	3	4	5	6	7	8	9	10
Page No.	Part No.	Angle of Attack, degrees	Initial X inches	Final X inches	$\Delta X$ inches			Y inches	Z inches
58	25	0.0	10.5	19.0	.50			4.1	-1.0
59	27	5.0							
60	31	-5.0	11.0						-1.1
61	63	0.0	10.0		1.00			-4.0	-1.0
62	64	0.0			.33			2.0	
			Initial XT inches	Final XT inches	$\Delta XT$ inches			YT inches	ZT inches
63, 64	48, 49	0.0	-5.8	24.0	.50			0.0	-14.2
65, 66	50, 51		-5.0					14.2	0.0
67	80	5.0	-5.5					0.0	-13.2
68	82							14.2	0.0
69	81		19.5						1.0
70	89	-5.0	-5.5					0.0	-14.1

TABLE VII.- UNCERTAINTIES FOR THE 16T WIND TUNNEL TESTS.

## FORCE AND MOMENT DATA

Uncertainty (+), Absolute

<u>C<sub>N</sub></u>	<u>C<sub>Y</sub></u>	<u>C<sub>A</sub></u>	<u>C<sub>LL</sub></u>	<u>C<sub>LM</sub></u>	<u>C<sub>LN</sub></u>	<u>C<sub>P</sub></u>
.0041	.0015	.0026	.0004	.0051	.0001	.0091

## WIND TUNNEL FREE-STREAM PARAMETERS

Uncertainty (+), Absolute

<u>M</u>	<u>Q, psf</u>	<u>P, psf</u>
.0033	2.243	2.566

## PROBE POSITION

Uncertainty (+), Absolute

<u>X, in.</u>	<u>Y, in.</u>	<u>Z, in.</u>	<u><math>\alpha_{probe}</math>, deg</u>
0.150	0.150	0.250	0.25

## FLOW AND MODEL ANGLES

Uncertainty (+), Absolute

<u>AAL, deg</u>	<u>SWL, deg</u>
0.229	0.229

## LOCAL CONDITIONS

Uncertainty (+), Absolute

<u>M<sub>l</sub></u>	<u>C<sub>P</sub></u>
0.018	0.030

TABLE VIII. - TYPICAL COMPARISON OF NOMINAL, TABULATED AND MEASURED Z-POSITIONS OF PROBE IN  $Y = 0$  PLANE (ALL VALUES ARE IN INCHES).

WIND-OFF				WIND-ON			
$\alpha$	Nominal	Tabulated	Measured Optically	$\alpha$	Nominal	Tabulated	Measured Optically
+5°	1.000	0.829	0.870				0.880
-5°	1.000	1.178	1.08				1.07

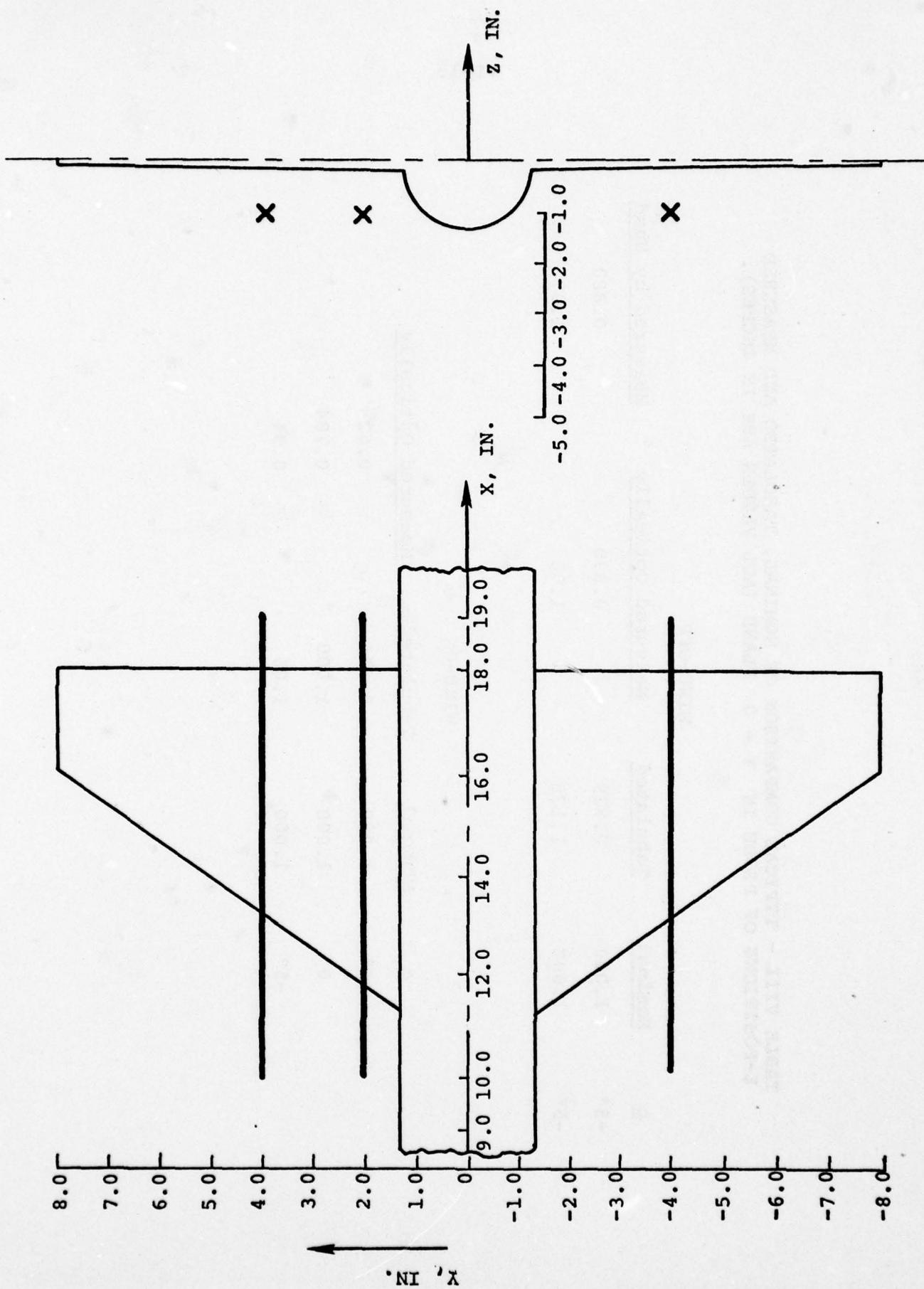
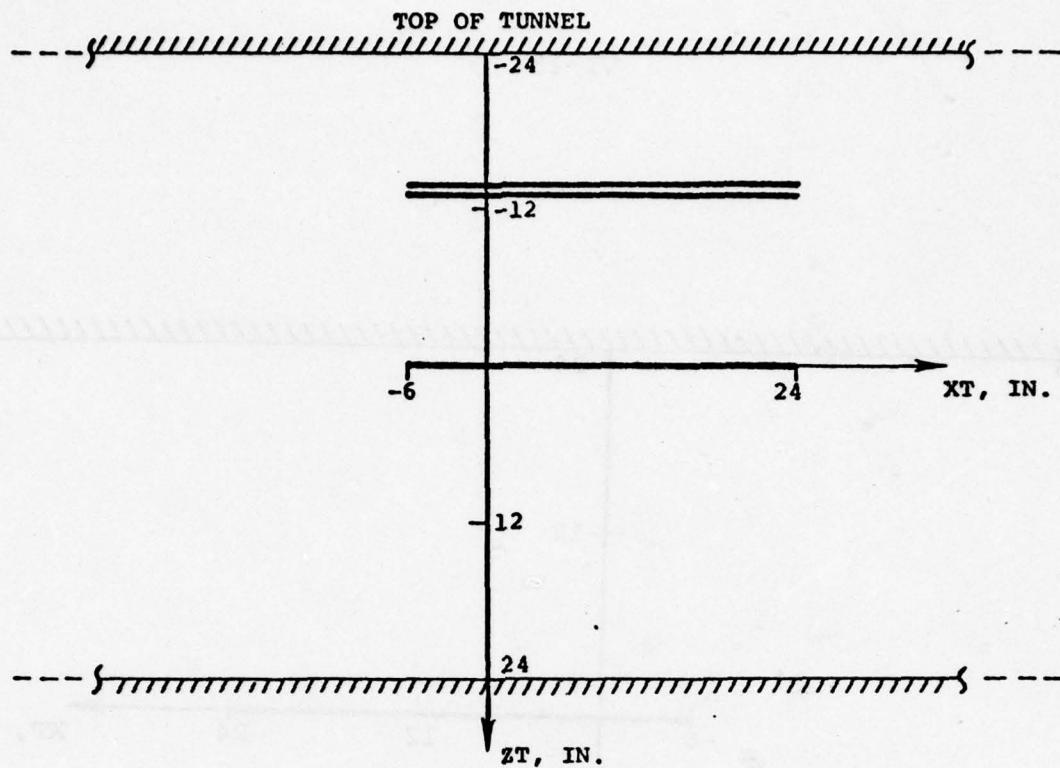
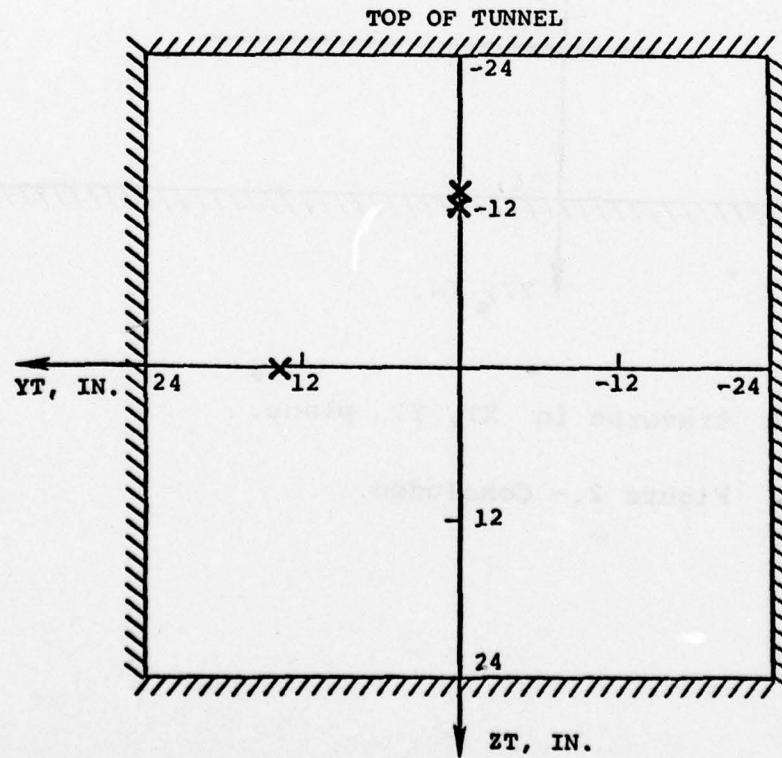


Figure 1.- General grid for inner flow-field measurements.



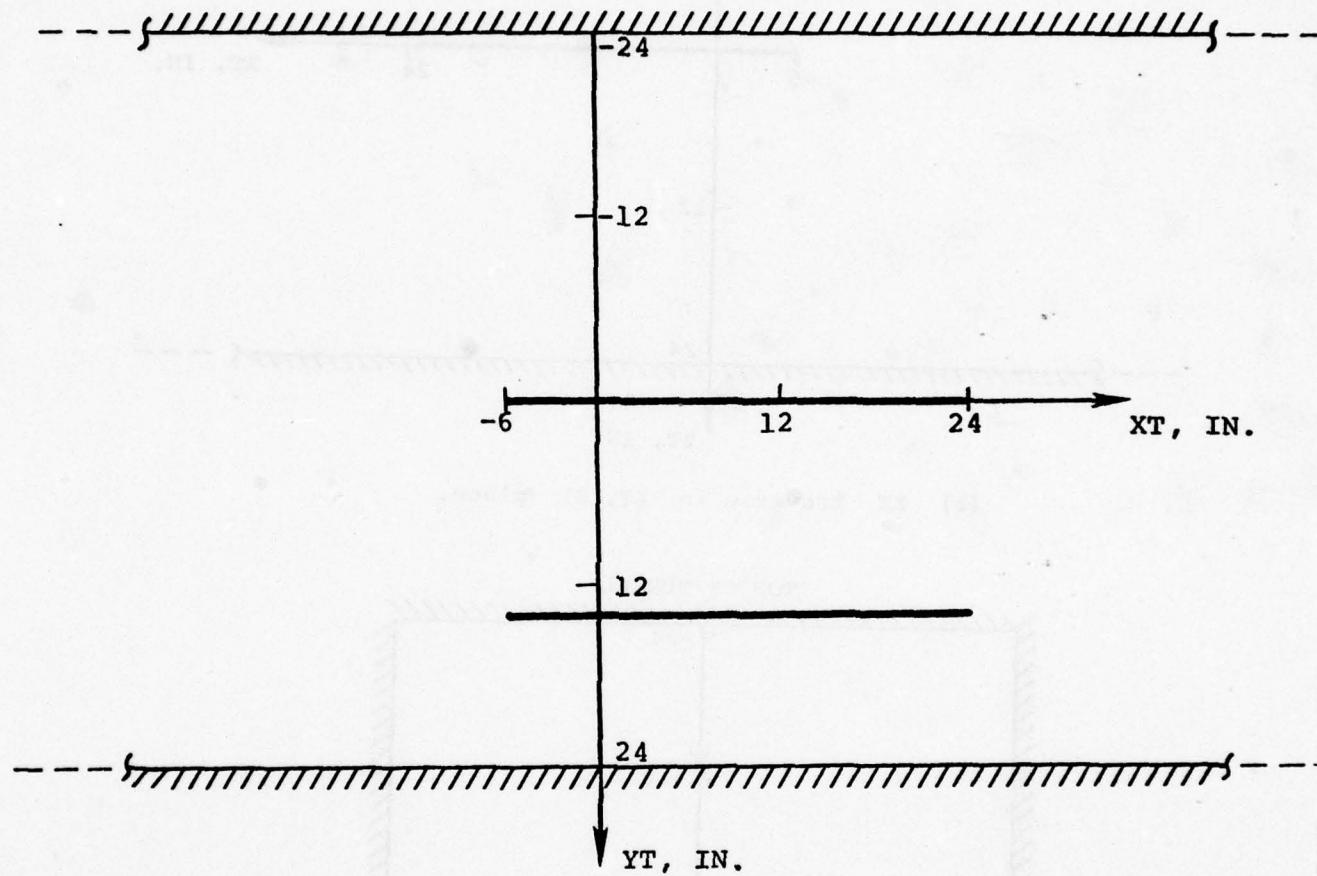
(a) XT traverse in XT, ZT plane.



(b) XT traverse in YT, ZT plane.

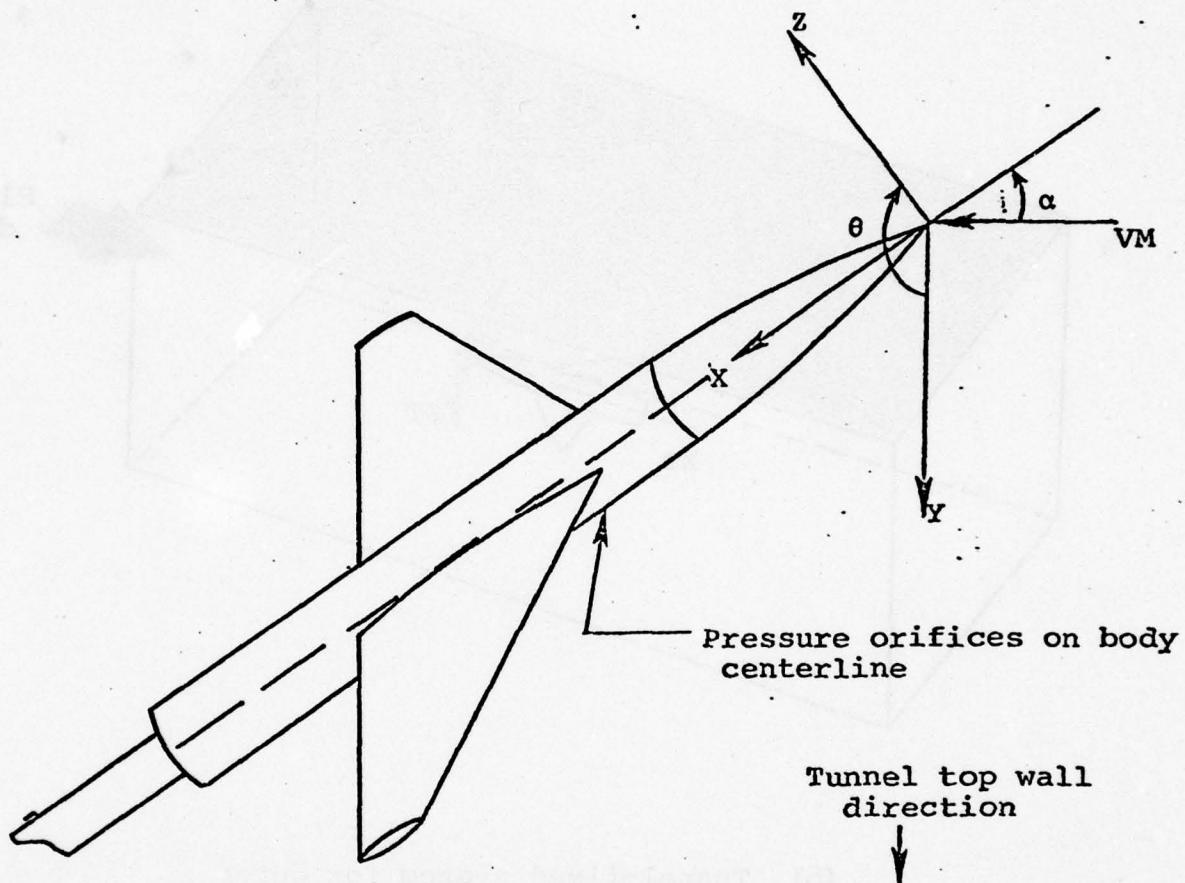
Figure 2.- General grids for outer flow-field surveys.

VI-18



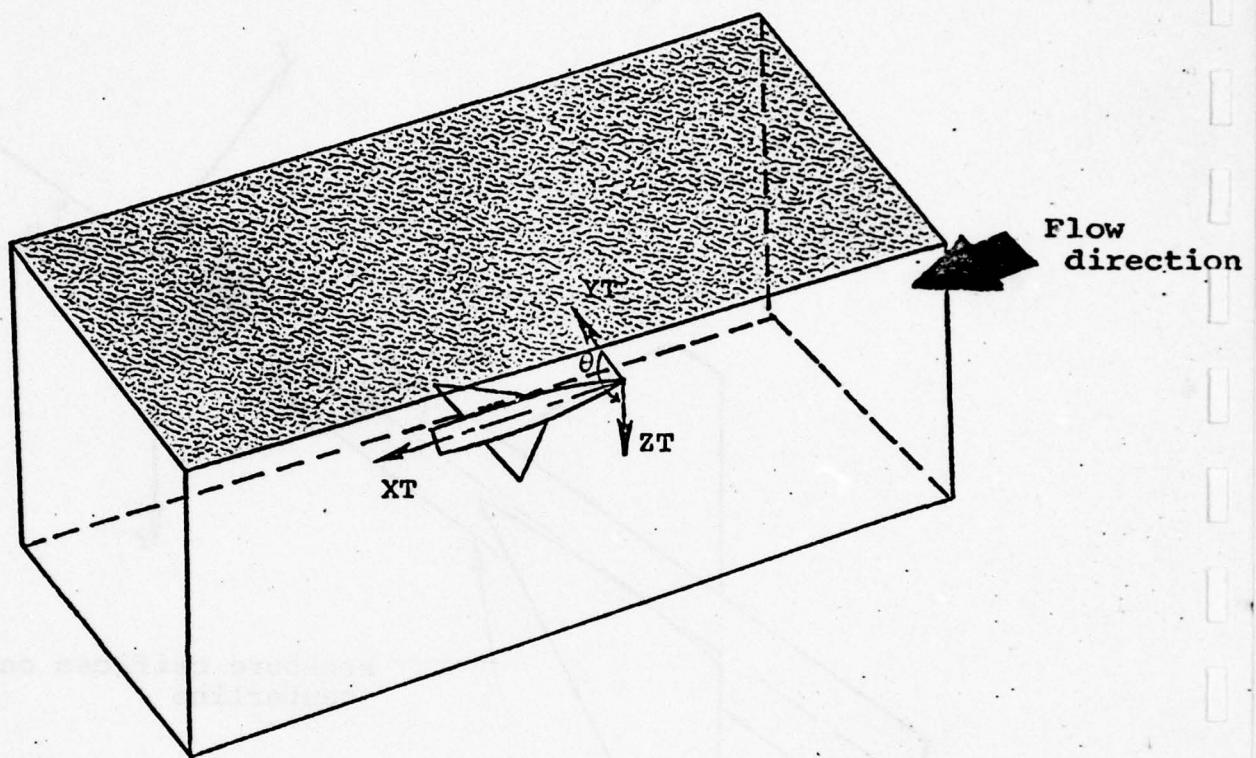
(c) XT traverse in XT, YT plane.

Figure 2.- Concluded.



(a) Body-fixed system for inner flow field surveys.

Figure 3.-Coordinate systems.



(b) Tunnel-fixed system for outer flow field surveys.

Figure 3.- Concluded.

## BODY COORDINATES

<u>x, in.</u>	<u>z, in.</u>
0	0
0.5	0.162
1.0	0.313
1.5	0.453
2.0	0.583
2.5	0.703
3.0	0.813
3.5	0.912
4.0	1.000
4.5	1.078
5.0	1.146
5.5	1.203
6.0	1.250
6.5	1.287
7.0	1.313
7.5	1.328
8.0	1.333
24.0	1.333

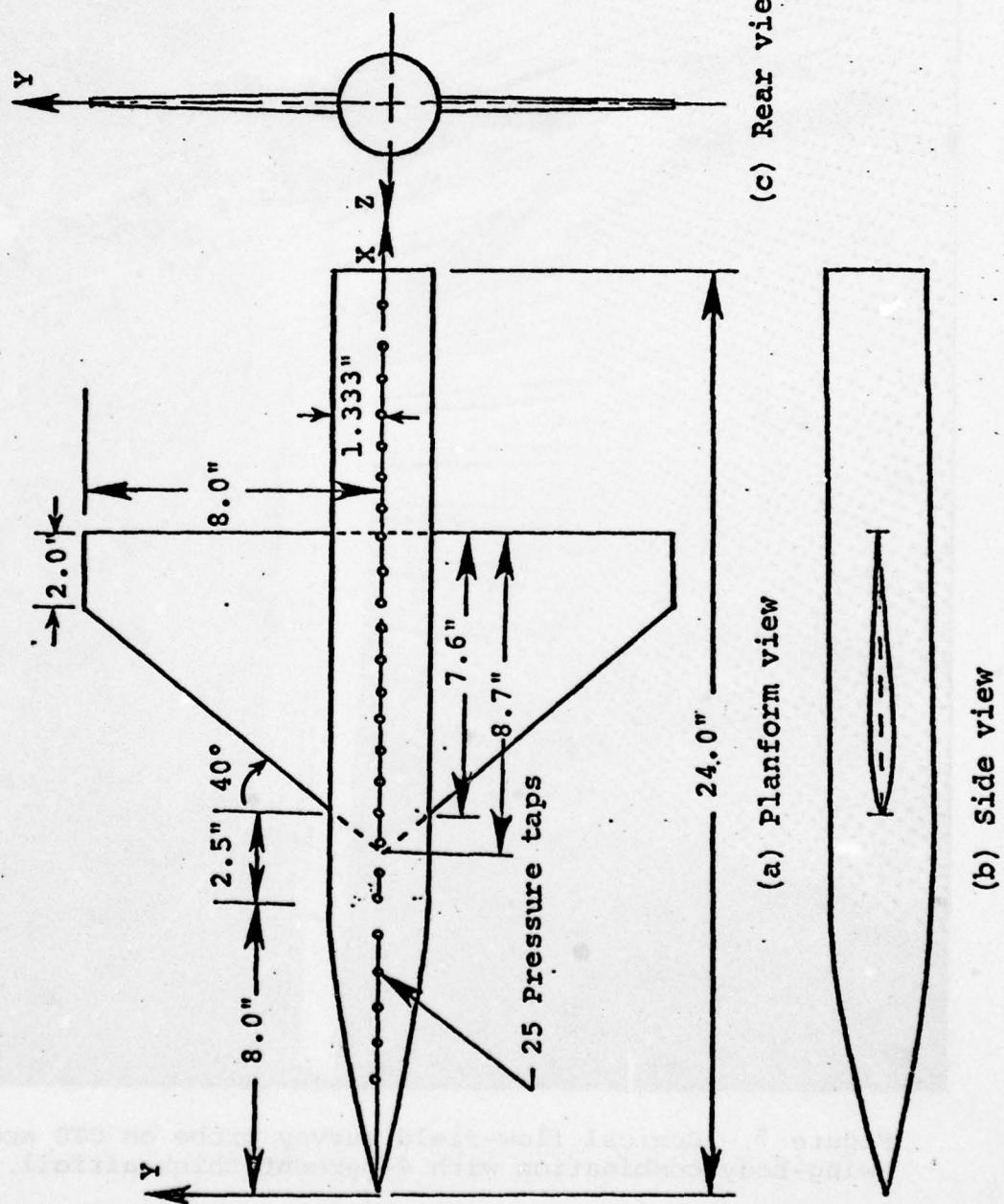
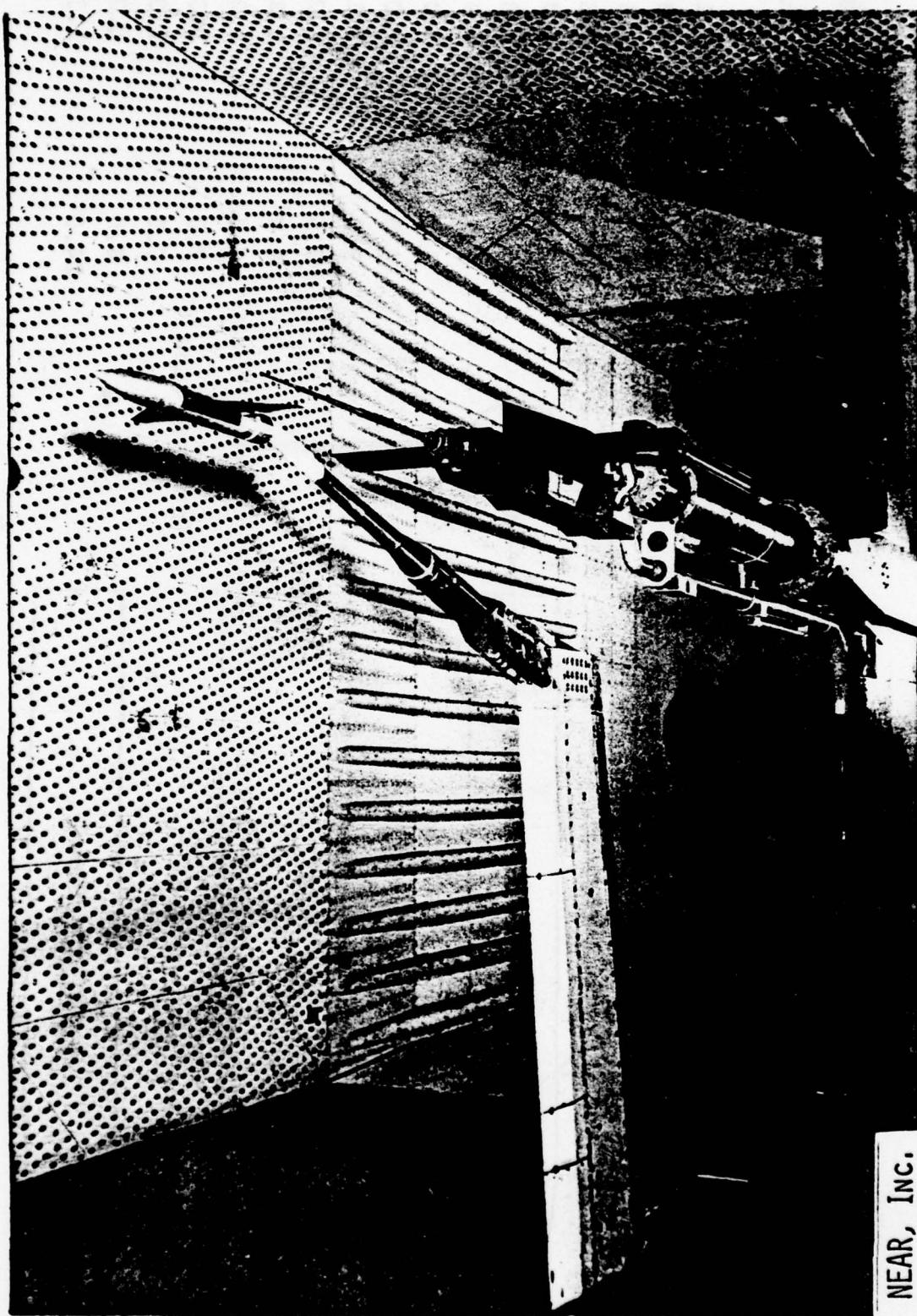


Figure 4.—Wing-body combination.



NEAR, INC.

Figure 5.- Conical flow-field survey probe on CTS and wing-body combination with 4-percent thick airfoil.

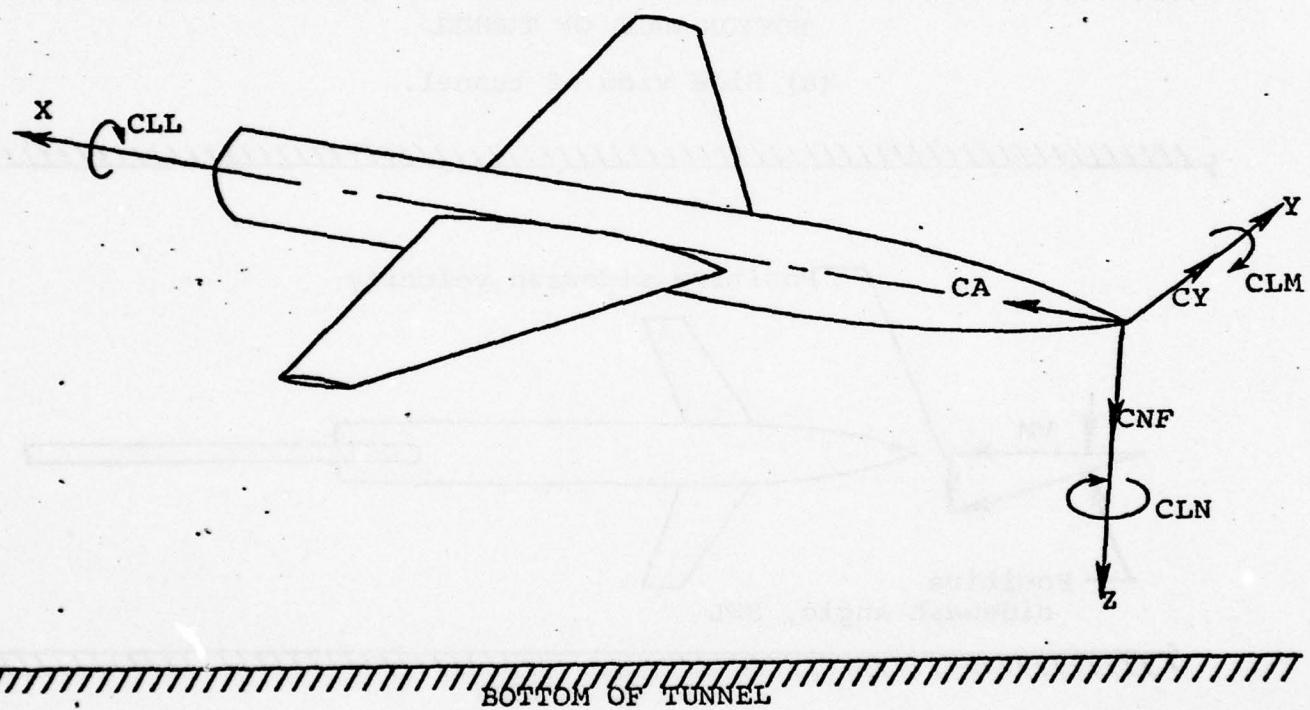


Figure 6.-Sketch of the wing-body configuration in the tunnel showing positive sense of forces and moments.

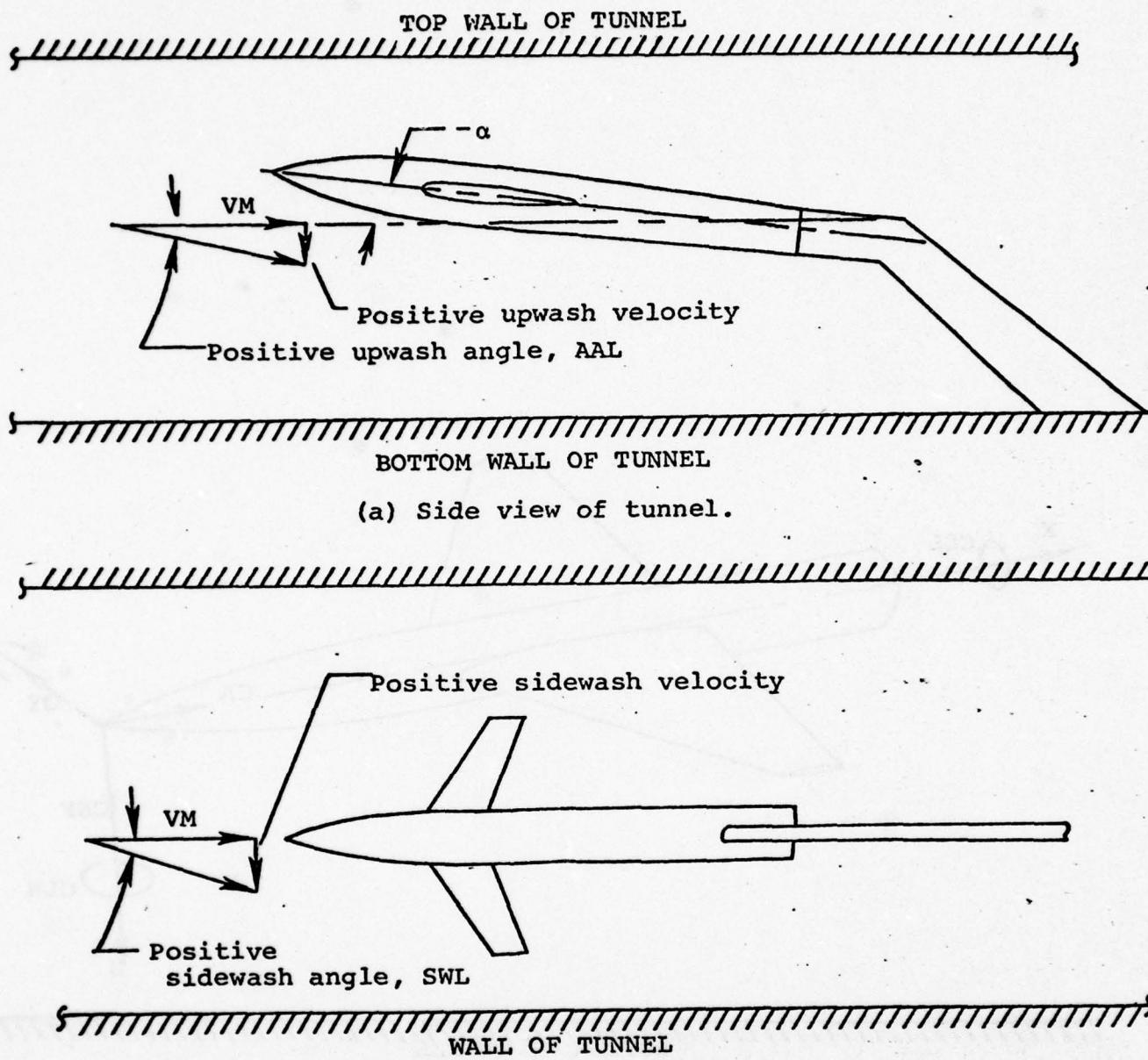


Figure 7.-Pictorial sign convention for upwash and sidewash angles.

TEST PANT HEIGHT ALTITUDE WINDS  
TF=45 T02 3.011 6.000 0.011 VI ST HUN SURVEY  
WIND FIELD SURVEY SUMMARY

POINT GP	AI	VI	ML	VTL	PT	VI	ML	VTL/VM	PTL/VM	PIL/PT	CPL	UI/VM	VI/VM	W/VW	AAIL	SWTL
1 25	24.016	0.926	981.07	1478.1	503.8	94.3	0.916	0.99	1.000	0.020	0.991	0.008	0.002	0.13	0.44	
2 25	21.955	0.926	981.16	1480.0	510.5	94.4	0.914	0.99	1.000	0.014	0.993	0.007	0.003	0.17	0.42	
3 25	20.037	0.925	981.50	1482.4	511.0	94.2	0.920	0.99	1.001	0.012	0.995	0.007	0.003	0.17	0.43	
4 25	14.007	0.925	981.05	1483.9	511.5	94.4	0.921	1.00	1.001	0.010	0.996	0.007	0.003	0.16	0.42	
5 25	16.622	0.925	981.67	1484.6	511.7	94.4	0.919	0.99	1.001	0.012	0.994	0.008	0.004	0.22	0.45	
6 25	14.001	0.926	982.14	1484.7	512.0	94.4	0.919	0.99	1.000	0.013	0.993	0.008	0.004	0.25	0.45	
7 25	11.563	0.926	982.07	1485.3	511.9	94.4	0.920	0.99	1.000	0.011	0.995	0.008	0.004	0.22	0.45	
8 25	10.030	0.926	981.99	1483.8	511.6	94.4	0.920	0.99	0.999	0.008	0.995	0.008	0.003	0.19	0.46	
9 25	7.944	0.926	982.06	1483.6	511.7	94.2	0.922	1.00	1.001	0.009	0.996	0.008	0.004	0.23	0.47	
10 25	5.956	0.925	981.02	1482.6	510.7	84.1	0.919	0.99	1.000	0.013	0.994	0.008	0.004	0.23	0.47	
11 25	3.963	0.926	981.59	1482.9	511.2	84.2	0.921	1.00	1.001	0.009	0.996	0.007	0.004	0.24	0.43	
12 25	2.021	0.926	981.41	1482.7	511.4	89.1	0.924	1.00	1.001	0.005	0.998	0.005	0.004	0.24	0.30	
13 25	0.032	0.926	981.95	1482.7	511.3	89.3	0.919	0.99	1.000	0.013	0.994	0.012	0.005	0.26	0.67	
14 25	-1.996	0.926	982.28	1483.0	511.4	89.7	0.921	1.00	1.001	0.010	0.995	0.008	0.005	0.27	0.47	
15 25	-3.971	0.926	982.53	1482.2	511.4	89.6	0.923	1.00	1.001	0.007	0.997	0.009	0.005	0.31	0.52	
16 25	-5.956	0.926	981.85	1480.1	510.4	89.2	0.917	0.99	1.000	0.016	0.992	0.004	0.004	0.26	0.24	



AEDC PROPULSION WIND TUNNEL  
TRANSonic 167

DATE  
4-14-77

TEST # 104 POINTS ALONG WIRE  
TP-445 104 3.014 6.010 14.12 -0.03 1 10.3

OUTER FLOWFIELD SURVEY SUMMARY

POINT #P	A1	a	V1	P1	U1	V1	P1	VTL/VM	PIL/VM	CPL	UT/VM	VI/VM	WI/VM	ATL	SWL
1 25	23.5486	0.925	941.23	147.3.7	509.5	89.4	0.916	0.99	1.001	0.014	0.994	0.016	0.003	0.19	0.90
2 25	22.024	0.925	941.10	1460.7	510.1	89.4	0.914	0.99	1.001	0.012	0.995	0.015	0.003	0.17	0.86
3 25	19.557	0.925	940.97	1462.7	510.6	89.5	0.919	0.99	1.001	0.012	0.995	0.016	0.004	0.23	0.90
4 25	14.010	0.925	941.11	1464.4	511.4	89.3	0.919	0.99	1.001	0.013	0.994	0.016	0.004	0.23	0.91
5 25	15.948	0.925	941.68	1464.8	511.6	89.4	0.916	0.99	1.001	0.015	0.993	0.015	0.004	0.21	0.88
6 25	13.983	0.925	942.33	1462.7	511.2	89.4	0.922	1.00	1.000	0.008	0.996	0.016	-0.002	-0.14	0.93
7 25	11.958	0.927	942.79	1467.1	511.3	89.3	0.921	0.99	1.001	0.014	0.994	0.016	0.005	0.27	0.94
8 25	10.058	0.927	943.13	1474.3	510.9	89.3	0.920	0.99	1.000	0.014	0.993	0.017	0.005	0.27	0.98
9 25	7.969	0.926	941.76	1477.4	509.6	89.3	0.919	0.99	1.000	0.013	0.994	0.016	0.004	0.24	0.96
10 25	6.004	0.925	941.35	1477.2	509.2	89.3	0.920	1.00	1.001	0.011	0.995	0.017	0.004	0.23	0.96
11 25	4.036	0.925	941.31	1477.1	509.1	89.2	0.919	0.99	1.000	0.011	0.995	0.016	0.004	0.23	0.95
12 25	1.481	0.925	941.06	1478.4	509.3	89.4	0.921	1.00	1.001	0.008	0.997	0.016	0.004	0.25	0.94
13 25	-0.013	0.925	940.63	1479.0	509.4	89.3	0.921	1.00	1.001	0.008	0.996	0.016	0.005	0.26	0.94
14 25	-1.951	0.925	941.13	1480.2	510.0	89.2	0.921	1.00	1.001	0.008	0.997	0.016	0.004	0.25	0.91
15 25	-3.979	0.925	941.29	1481.0	510.4	89.2	0.922	1.00	1.003	0.010	0.997	0.016	0.011	0.62	0.93
16 25	-5.981	0.925	941.62	1482.3	510.9	89.4	0.922	1.00	1.001	0.007	0.997	0.016	0.005	0.27	0.93

TEST PART NO. ALFA 144 41-16 YI 71 MUN SURVEY  
 TF-445 TUG 3-014 0.010 NONE 6.00 9.10 110  
 DULUTH FLIGHT PLANE SURVEY SUMMARY

DATE 4-14-77 AEDC PROPULSION WIND TUNNEL  
 TRANSONIC INT

POINT #	A1	V1	M1	W1	UT/VM	VT/VM	VL/VM	PL/PT	CPL	UT/VM	VI/VM	WT/VM	AA1L	SWTL
1	23.956	0.723	973.73	1478.8	508.5	0.915	0.95	1.000	0.014	0.993	0.016	0.002	0.11	0.93
2	22.061	0.723	978.86	1478.7	508.6	0.917	0.95	1.001	0.011	0.994	0.016	0.001	0.03	0.91
3	19.943	0.723	978.86	1478.6	508.6	0.917	0.95	1.000	0.013	0.994	0.016	0.002	0.14	0.90
4	17.937	0.723	960.07	1478.4	508.5	0.917	0.95	1.000	0.012	0.994	0.016	0.006	0.36	0.89
5	15.949	0.723	979.88	1478.2	508.5	0.914	0.918	1.000	0.011	0.995	0.015	0.009	0.51	0.89
6	13.949	0.724	940.21	1478.1	508.8	0.915	0.919	1.000	0.010	0.996	0.015	0.008	0.46	0.89
7	12.031	0.724	940.34	1473.4	503.0	0.917	0.916	0.999	0.000	0.914	0.015	0.005	0.26	0.88
8	10.010	0.724	940.77	1474.6	504.5	0.914	0.919	1.000	0.000	0.995	0.015	0.007	0.43	0.87
9	7.941	0.724	960.49	1479.5	509.4	0.913	0.920	1.000	0.000	0.999	0.016	0.006	0.35	0.92
10	5.944	0.725	961.47	1480.5	510.0	0.916	0.921	1.000	0.000	0.998	0.015	0.005	0.30	0.87
11	4.034	0.725	960.96	1480.6	510.0	0.913	0.921	1.000	0.000	0.998	0.015	0.005	0.30	0.84
12	0.000	0.724	940.65	1481.3	509.9	0.916	0.920	1.000	1.001	0.998	0.016	0.005	0.27	0.79
13	2.95	0.724	980.78	1481.7	510.1	0.916	0.921	1.000	1.001	0.997	0.015	0.005	0.28	0.88
14	2.5	-2.174	980.78	1481.7	510.1	0.916	0.921	1.000	1.001	0.997	0.015	0.005	0.29	0.87
15	2.5	-4.002	980.08	1481.8	509.8	0.914	0.919	1.000	1.000	0.996	0.015	0.005	0.29	0.87
16	2.5	-6.003	980.24	1480.10	510.3	0.914	0.921	1.000	1.001	0.997	0.015	0.005	0.28	0.84

TEST PART MEXICO-6 ALTITUDE WIND YI SURVEY  
TF-445 97 2.597 0.010 NONE -0.03 -14.18 1.101

WIND FLOWFIELD SURVEY SUMMARY

POINT #P	X1	Y1	Z1	V1	P1	T1	AL	VT1/VM	P1/PFT	CPL	U1/VM	VI/VM	WI/VM	AA1L	SW1L	
1	25	23.591	0.574	1025.15	1449.9	524.2	H9.4	0.964	0.97	1.000	0.054	0.973	0.012	0.003	0.19	0.73
2	25	21.940	0.574	1025.08	1448.7	523.6	H9.5	0.964	0.99	1.000	0.017	0.992	0.000	0.004	0.22	0.43
3	25	14.544	0.574	1025.03	1451.5	524.0	H9.6	0.973	1.00	1.001	0.003	0.999	0.007	0.004	0.22	0.40
4	25	17.948	0.475	1025.60	1456.4	527.1	H9.7	0.975	1.00	1.001	0.002	1.000	0.007	0.004	0.21	0.37
5	25	15.545	0.976	1027.38	1445.1	527.2	H9.4	0.970	0.99	1.000	0.011	0.945	0.007	0.004	0.21	0.42
6	25	14.012	0.476	1026.41	1449.5	526.1	H9.2	0.960	0.99	1.000	0.024	0.986	0.008	0.004	0.22	0.45
7	25	11.994	0.976	1028.65	1446.5	523.6	H9.4	0.966	0.99	1.000	0.018	0.991	0.008	0.004	0.23	0.47
8	25	10.034	0.975	1025.99	1446.2	523.3	H9.4	0.971	1.00	1.000	0.009	0.996	0.008	0.003	0.20	0.46
9	25	7.949	0.975	1025.64	1449.0	523.4	H9.4	0.976	1.00	1.000	0.001	1.001	0.007	0.004	0.25	0.40
10	25	6.029	0.976	1025.53	1452.0	522.3	H9.5	0.974	1.00	1.000	-0.005	1.003	0.006	0.004	0.23	0.36
11	25	4.028	0.975	1026.33	1456.6	527.2	H9.5	0.980	1.00	1.001	-0.006	1.004	0.006	0.004	0.23	0.35
12	25	2.025	0.476	1027.05	1457.4	527.9	H9.5	0.977	1.00	1.001	-0.001	1.001	0.007	0.005	0.26	0.40
13	25	-0.010	0.975	1025.33	1453.7	526.2	H9.4	0.970	1.00	1.000	-0.010	0.995	0.008	0.004	0.25	0.45
14	25	-1.982	0.975	1026.49	1452.2	525.6	H9.6	0.972	1.00	1.000	0.007	0.997	0.009	0.005	0.26	0.50
15	25	-4.007	0.975	1026.67	1450.9	525.2	H9.6	0.973	1.00	1.000	0.004	0.998	0.008	0.004	0.24	0.46
16	25	-5.969	0.974	1025.29	1448.5	523.8	H9.2	0.968	0.99	1.000	0.011	0.995	0.008	0.004	0.26	0.47

DATE AEUC PROPULSION WIND TUNNEL  
4-14-77 TRANSONIC 16T

DATE 4-14-77  
AEDC PROPELLION WIND TUNNEL  
TRANSONIC TAT

TEST POINT 1010-6 ALTITUDE 96 2046 0.00 MINE -0.02 101 102 103 104 105 106 107 108 109 100 SURVEY FLOWFIELD SURVEY SUMMARY

POINT	UP	A1	A2	V1	V2	P1	P2	T1	T2	VTL/VH	PIL/PF	CPL	UI/VW	VT/VH	WT/WM	ATL	SWL
1	25	23.572	0.972	1025.25	1450.6	524.6	89.1	0.964	0.99	1.000	0.917	0.991	0.011	0.004	0.23	0.61	
2	25	23.476	0.975	1026.04	1453.0	526.0	89.4	0.967	0.99	1.001	0.915	0.993	0.011	0.003	0.20	0.62	
3	25	21.456	0.975	1025.46	1452.3	525.5	89.4	0.962	0.99	1.001	0.923	0.99	0.011	0.003	0.20	0.61	
4	25	19.974	0.976	1026.07	1451.4	525.5	89.4	0.970	1.000	1.001	0.910	0.995	0.011	0.005	0.31	0.61	
5	25	17.993	0.975	1025.46	1451.6	525.4	89.6	0.975	1.000	1.001	0.902	1.000	0.011	0.004	0.21	0.64	
6	25	16.025	0.976	1026.46	1452.0	525.9	89.4	0.972	1.000	1.001	0.908	0.997	0.011	0.006	0.34	0.64	
7	25	13.956	0.976	1025.34	1453.2	526.3	89.4	0.972	1.000	1.001	0.906	0.996	0.011	0.004	0.22	0.65	
8	25	12.022	0.976	1026.64	1454.1	526.6	89.4	0.977	1.000	1.001	0.901	0.991	0.011	0.013	0.63		
9	25	10.015	0.976	1026.73	1453.9	526.5	89.4	0.968	1.001	1.004	-0.016	1.016	0.010	0.004	0.22	0.60	
10	25	7.493	0.975	1026.67	1453.9	525.9	89.2	0.970	1.000	1.001	0.009	0.996	0.011	0.004	0.22	0.65	
11	25	6.024	0.975	1025.39	1452.9	525.6	89.5	0.971	1.000	1.000	0.007	0.996	0.012	0.004	0.25	0.66	
12	25	4.017	0.974	1025.69	1452.0	525.1	89.6	0.966	0.99	1.000	0.015	0.992	0.011	0.004	0.24	0.63	
13	25	1.993	0.974	1025.77	1451.4	524.9	89.5	0.969	1.000	1.000	0.010	0.995	0.011	0.004	0.23	0.64	
14	25	-0.016	0.974	1025.29	1449.6	524.2	89.5	0.969	1.000	1.000	0.009	0.996	0.011	0.004	0.25	0.63	
15	25	-2.074	0.974	1025.53	1450.0	524.6	89.4	0.975	1.000	1.001	0.001	1.000	0.011	0.005	0.26	0.64	
16	25	-3.951	0.974	1024.65	1452.2	524.9	89.1	0.971	1.000	1.001	0.006	0.997	0.011	0.005	0.26	0.65	
17	25	-5.964	0.975	1025.65	1454.8	526.2	89.4	0.973	1.000	1.001	0.003	0.999	0.010	0.004	0.24	0.60	
18	25	-7.450	0.975	1026.40	1456.0	527.0	89.4	0.973	1.000	1.000	0.004	0.998	0.011	0.005	0.26	0.63	
19	25	-10.617	0.975	1026.31	1456.2	527.0	89.5	0.971	1.000	1.001	0.001	0.998	0.012	0.005	0.27	0.67	
20	25	-11.444	0.976	1026.76	1455.4	527.0	89.4	0.974	1.000	1.001	0.003	0.999	0.012	0.005	0.32	0.66	
21	25	-21.573	0.974	1026.62	1455.4	526.6	89.3	0.972	1.000	1.000	0.007	0.997	0.011	0.005	0.30	0.53	
22	25	-24.017	0.974	1025.21	1452.0	524.2	89.4	0.977	1.000	1.001	-0.004	1.000	0.001	0.005	0.26	0.63	
23	25	-25.572	0.974	1025.74	1455.9	523.6	89.3	0.974	1.000	1.000	0.000	1.000	0.001	0.005	0.27	0.63	
24	25	-13.945	0.976	1026.62	1454.4	526.6	89.4	0.972	1.000	1.000	0.007	0.997	0.011	0.005	0.24	0.60	
25	25	-15.576	0.976	1026.69	1452.0	525.7	89.4	0.963	0.99	1.000	0.022	0.999	0.008	0.005	0.29	0.48	
26	25	-18.003	0.976	1026.51	1450.4	525.1	89.4	0.944	0.97	1.002	0.058	0.972	0.011	0.019	-1.13	0.67	
27	25	-19.577	0.975	1025.66	1449.1	523.9	89.2	0.971	1.000	1.000	0.008	0.996	0.012	0.005	0.29	0.68	
28	25	-21.573	0.974	1024.93	1449.4	523.6	89.3	0.974	1.000	1.000	0.000	1.000	0.001	0.006	0.30	0.53	
29	25	-24.017	0.974	1025.21	1450.0	524.2	89.4	0.977	1.000	1.001	-0.004	1.000	0.003	0.005	0.26	0.63	
30	25	-25.572	0.974	1025.12	1451.1	524.6	89.4	0.969	1.000	1.000	0.009	0.996	0.011	0.005	0.30	0.64	
31	25	-27.450	0.974	1025.07	1452.4	524.9	89.5	0.974	1.000	1.001	0.000	1.000	0.001	0.005	0.31	0.55	
32	25	-29.964	0.974	1025.62	1453.3	525.6	89.5	0.969	1.000	1.001	0.010	0.996	0.012	0.005	0.30	0.70	
33	25	-32.042	0.974	1024.91	1453.6	525.4	89.3	0.976	1.000	-0.004	1.002	0.008	0.008	0.33	0.45		
34	25	-33.960	0.974	1025.39	1453.6	525.0	89.4	0.973	1.000	1.000	0.002	0.999	0.011	0.006	0.34	0.63	
35	25	-35.964	0.974	1025.37	1450.3	524.4	89.4	0.972	1.000	1.001	0.005	0.998	0.012	0.006	0.33	0.69	
36	25	-38.011	0.974	1025.40	1451.1	524.6	89.6	0.943	0.97	0.997	0.049	0.973	0.011	0.003	0.18	0.65	
37	25	-40.030	0.974	1024.92	1452.0	524.8	89.3	0.974	1.000	1.001	0.001	1.000	0.011	0.006	0.35	0.63	
38	25	-42.021	0.974	1024.56	1453.5	525.2	89.2	0.974	1.000	1.001	0.000	1.000	0.010	0.006	0.33	0.59	
39	25	-47.949	0.975	1025.93	1452.6	525.6	89.4	0.974	1.000	1.000	0.002	0.999	0.011	0.007	0.42	0.65	
40	25	-17.986	0.975	1025.44	1452.1	524.1	89.4	0.966	0.99	1.000	0.015	0.992	0.011	0.005	0.30	0.65	



TEST PANT METAL-6 ALTITUDE 21 JUN 71  
1F-045 101 3.002 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016

4-16-77 - ADUC PROPULSION WIND TUNNEL  
TRANSONIC 161

POINT	6H	A1		V1		P1		T1		ML		VTL/VM		PIL/P1		CPL		U1/VM		VT/VW		W1/WM		ANTL		SWTL			
		m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	
1	25	23.970	.025	107.671	14.33.5	54.1.1	90.0	1.006	0.943	1.001	0.032	0.984	0.006	0.004	0.21	0.33													
2	25	21.964	.025	106.641	14.33.4	54.0.7	89.7	1.002	0.948	1.000	0.034	0.981	0.005	0.004	0.25	0.34													
3	25	19.692	.024	106.477	14.32.7	54.0.0	89.4	0.987	0.977	1.000	0.061	0.970	0.012	0.004	0.24	0.69													
4	25	18.020	.025	107.012	14.34.2	54.1.1	89.7	0.992	0.97	0.949	0.052	0.973	0.005	0.004	0.22	0.28													
5	25	16.018	.025	106.946	14.34.3	54.1.9	89.8	1.005	0.948	1.000	0.033	0.984	0.006	0.004	0.22	0.35													
6	25	14.004	1	0.026	107.072	14.34.4	89.4	1.005	0.948	1.000	0.034	0.983	0.006	0.004	0.22	0.36													
7	25	11.549	.027	107.137	14.35.1	54.2.1	89.7	1.000	0.98	1.000	0.043	0.979	0.004	0.004	0.26	0.24													
8	25	9.978	.021	107.208	14.35.7	54.2.5	89.9	1.002	0.948	1.001	0.042	0.980	0.005	0.005	0.28	0.31													
9	25	7.996	.025	107.202	14.35.9	54.2.9	89.5	1.006	0.948	1.001	0.036	0.983	0.006	0.004	0.24	0.35													
10	25	5.944	.026	107.073	14.35.1	54.1.8	89.7	1.003	0.948	1.001	0.039	0.981	0.005	0.004	0.26	0.31													
11	25	3.997	.026	107.114	14.35.6	54.2.2	89.6	1.003	0.948	1.001	0.039	0.981	0.004	0.004	0.22	0.50													
12	25	1.944	.026	107.060	14.35.9	54.2.1	89.6	1.004	0.948	1.001	0.036	0.982	0.005	0.004	0.22	0.31													
13	25	0.075	1.026	107.121	14.36.7	54.2.5	89.6	1.011	0.99	1.001	0.026	0.988	-0.000	0.004	0.25	-0.00													
14	25	-1.977	1.026	107.099	14.35.5	54.2.1	89.5	1.000	0.948	1.001	0.043	0.979	0.005	0.005	0.26	0.30													
15	25	-4.015	1.027	107.166	14.34.5	54.2.0	89.7	1.002	0.948	1.000	0.040	0.980	0.006	0.005	0.29	0.36													
16	25	-5.984	1.027	107.193	14.33.3	54.1.5	89.9	1.007	0.948	1.000	0.033	0.984	0.007	0.004	0.25	0.42													

DATE 4-14-77 AEDC PROPULSION WIND TUNNEL  
TRANSonic 1st

**21 RUN SURVEY  
-0.16 -1 102  
10TH FLOOR FIELD SURVEY SUMMARY**

POINT	GP	A1	A2	V1	V2	M1	M2	T1	T2	VTL/VM	PTL/PV	CPL	UTL/VM	WT/VM	ATL/VM	SWTL
1	25	23.940	1.028	1070.55	1433.5	541.2	89.8	1.007	0.99	-	0.985	0.013	0.003	0.20	0.79	
2	25	22.041	1.026	1071.51	1432.2	540.4	89.8	1.016	0.99	1.001	0.983	0.009	0.003	0.20	0.52	
3	25	19.463	1.026	1071.39	1430.9	540.64	89.9	1.003	0.98	1.001	0.981	0.009	0.003	0.16	0.50	
4	25	16.009	1.027	1071.48	1430.7	540.3	89.9	1.005	0.98	1.001	0.981	0.008	0.003	0.20	0.49	
5	25	15.983	1.028	1072.28	1431.1	541.0	89.6	1.002	0.98	1.001	0.982	0.007	0.003	0.21	0.62	
6	25	14.029	1.029	1072.17	1432.6	541.0	89.7	1.005	0.98	1.000	0.981	0.006	0.003	0.21	0.57	
7	25	11.992	1.028	1071.20	1431.6	541.4	89.8	1.007	0.98	1.001	0.982	0.005	0.004	0.23	0.58	
8	25	10.046	1.025	1069.40	1435.9	541.3	90.0	1.003	0.98	1.001	0.982	0.009	0.004	0.25	0.54	
9	25	7.940	1.026	1069.18	1436.2	541.4	89.8	1.005	0.98	1.001	0.984	0.010	0.004	0.23	0.56	
10	25	6.031	1.028	1064.79	1436.0	541.3	89.4	1.001	0.98	1.000	0.981	0.010	0.004	0.22	0.59	
11	25	4.053	1.028	1069.05	1435.0	541.0	89.6	1.000	0.98	1.000	0.980	0.010	0.004	0.26	0.61	
12	25	2.014	1.024	1069.42	1435.6	540.5	89.9	1.002	0.98	1.000	0.980	0.010	0.004	0.22	0.59	
13	25	0.017	1.027	1070.06	1432.7	540.3	90.1	0.999	0.98	1.000	0.982	0.012	0.005	0.27	0.53	
14	25	-1.944	1.024	1064.12	1431.7	541.9	89.9	0.998	0.98	1.000	0.984	0.012	0.005	0.27	0.55	
15	25	-3.972	1.025	1069.70	1430.3	539.5	89.5	0.999	0.98	1.001	0.982	0.012	0.006	0.23	0.57	
16	25	-6.011	1.025	1069.61	1430.7	539.7	89.4	1.000	0.98	1.000	0.980	0.010	0.005	0.28	0.56	
17	25	-7.955	1.025	1069.68	1431.4	539.4	89.5	1.002	0.98	1.001	0.983	0.011	0.009	0.30	0.55	
18	25	-9.975	1.025	1070.27	1432.5	540.2	89.9	1.004	0.98	1.000	0.983	0.010	0.005	0.32	0.59	
19	25	-11.972	1.025	1069.54	1432.3	540.3	89.7	1.005	0.98	1.001	0.984	0.010	0.004	0.23	0.58	
20	25	-13.996	1.025	1069.55	1432.3	540.3	89.4	1.010	0.99	1.000	0.984	0.014	0.005	0.30	0.61	
21	25	-15.992	1.025	1069.41	1433.0	540.4	89.5	1.006	0.98	1.000	0.981	0.011	0.005	0.30	0.63	
22	25	-17.913	1.025	1069.46	1433.1	540.6	89.7	1.011	0.99	1.001	0.982	0.013	0.005	0.27	0.60	
23	25	-20.022	1.025	1069.46	1433.3	540.7	89.7	1.012	0.99	1.001	0.982	0.010	0.005	0.31	0.57	
24	25	-22.024	1.025	1064.81	1433.4	540.4	89.5	1.017	0.99	1.000	0.983	0.013	0.005	0.32	0.60	
25	25	-23.941	1.025	1069.45	1432.9	540.4	89.8	1.002	0.98	1.000	0.981	0.011	0.006	0.34	0.36	
26	25	-26.025	1.025	1070.25	1433.1	540.7	89.9	1.012	0.99	1.001	0.983	0.012	0.004	0.23	0.53	
27	25	-27.947	1.025	1070.64	1432.5	540.4	89.7	1.008	0.99	1.000	0.986	0.010	0.004	0.45	0.53	
28	25	-30.007	1.025	1069.95	1432.0	540.2	89.7	0.998	0.98	1.000	0.984	0.006	0.006	0.35	0.34	
29	25	-31.960	1.025	1069.63	1431.9	540.2	89.5	0.996	0.98	1.000	0.983	0.005	0.006	0.34	0.27	
30	25	-34.026	1.025	1069.74	1432.3	540.2	89.8	1.003	0.98	1.001	0.987	0.009	0.006	0.32	0.54	
31	25	-35.967	1.024	1069.11	1432.6	540.1	89.5	0.998	0.98	1.000	0.983	0.007	0.006	0.32	0.49	
32	25	-37.937	1.024	1069.66	1433.1	540.4	89.8	1.002	0.98	1.001	0.982	0.010	0.006	0.33	0.56	
33	25	-39.949	1.024	1069.57	1433.5	540.6	89.7	1.001	0.98	1.001	0.983	0.008	0.006	0.33	0.56	
34	25	-41.949	1.024	1069.57	1433.5	540.6	89.7	1.001	0.98	1.001	0.983	0.006	0.006	0.33	0.56	

TEST PART REFLUX-6 ALFA WIND VI VT WIND SURVEY

TF-445 99 3.002 0.00 NNE 14.13 -0.05 1 103

OUTER PLATELLA SURVEY SUMMARY

DATE 4-14-77 AEDC PROPULSION WIND TUNNEL

TRANSONIC 1&T

POINT GP	AT	AT	W	V/L	P/L	V/L/VM	P/L/PF	CPL	U/L	U/L/VM	VL/VM	WI/VM	AATL	SWTL
1 25	24.022	1.024	1064.13	1436.1	541.5	89.5	0.996	0.94	1.00	0.046	0.977	0.014	0.003	0.17
2 25	21.444	1.024	1064.24	1443.2	544.2	89.4	1.014	0.94	1.001	0.018	0.992	0.013	0.003	0.18
3 25	20.644	1.024	1072.54	1449.0	546.5	89.3	1.017	0.94	1.001	0.019	0.991	0.013	0.003	0.17
4 25	14.014	1.024	1064.74	1426.8	537.7	89.4	0.986	0.97	1.000	0.061	0.969	0.016	0.003	0.20
5 25	16.002	1.026	1070.71	1431.5	540.4	89.6	1.005	0.98	1.001	0.035	0.983	0.010	0.003	0.20
6 25	14.001	1.026	1070.94	1435.0	542.0	89.8	1.001	0.98	1.001	0.041	0.980	0.011	0.003	0.20
7 25	12.027	1.026	1070.93	1435.2	541.9	89.6	1.003	0.98	1.000	0.039	0.961	0.014	0.004	0.25
8 25	10.000	1.026	1070.43	1435.0	541.9	89.5	1.007	0.98	1.000	0.031	0.985	0.014	0.004	0.25
9 25	6.001	1.026	1070.71	1434.3	541.7	89.3	1.006	0.98	1.001	0.034	0.983	0.013	0.004	0.23
10 25	5.581	1.023	1068.42	1432.6	539.8	89.4	1.004	0.98	1.001	0.033	0.984	0.014	0.003	0.20
11 25	3.988	1.026	1070.43	1432.3	540.5	89.5	1.002	0.98	1.001	0.039	0.981	0.013	0.004	0.23
12 25	1.974	1.025	1070.18	1432.0	540.3	89.8	1.002	0.98	1.001	0.038	0.981	0.013	0.004	0.24
13 25	-0.000	1.025	1069.93	1431.9	540.2	89.6	1.002	0.98	1.001	0.039	0.981	0.013	0.004	0.24
14 25	-1.965	1.025	1069.58	1431.8	540.0	89.5	1.001	0.98	1.001	0.039	0.981	0.013	0.005	0.27
15 25	-3.945	1.024	1069.00	1432.0	539.9	89.4	0.997	0.98	1.001	0.046	0.978	0.012	0.004	0.25
16 25	-5.974	1.025	1069.66	1433.3	540.6	89.7	0.998	0.98	1.000	0.043	0.978	0.012	0.005	0.26

TEST PART M PT P MEX10-6 VM U TT WING RUN SURVEY DATE AEDC PROPULSION WIND TUNNEL  
TP-4445 4 0.800 1573.0 1032.4 3.005 566.2 461.97 89.20 4 PCT 7 70T 4-12-77 TRANSONIC 161

ALPH	CN	CF	CA	CLM	CLN	CLL	CAF	CAB
5.42	0.5150	0.0018	0.0175	0.0424	0.0003	0.0014	0.0072	0.0103
2.13	0.2024	0.0006	0.0238	0.0193	0.0003	0.0025	0.0143	0.0095
-0.06	0.0106	-0.0000	0.0075	0.0020	0.0000	0.0027	0.0184	0.0091
-2.25	-0.1772	-0.0006	0.0259	-0.0156	-0.0001	0.0033	0.0170	0.0090
-5.57	-0.4942	-0.0020	0.009.	-0.0388	-0.0006	0.0037	0.0120	0.0089

TEST	PART	N	21	22	MEASUREMENTS	V:	W:	MUN SURVEY	DATE	AEDC PROPULSION WIND TUNNEL
TF-945	9	0.000	1573.0	1632.4	3.005	464.2	461.37	49.20	4 PCT	7. 701 4-12-77 TRANSonic 16T
ORIFICE			PRESSURE COEFFICIENTS	CPS (PS-PI/4)						
			ALF=0.62	ALF=0.63	ALF=0.64	ALF=0.65	ALF=0.66	ALF=0.67	ALF=0.68	ALF=0.69=5.57
1	CPS 1=	-0.0413	-0.0552	-0.0652	-0.0722	0.0576	0.0132			
2	CPS 2=	-0.0916	-0.07636	-0.0559	-0.0359	-0.0088		0.0398		
3	CPS 3=	-0.1251	-0.1101	-0.1047	-0.0947	-0.0646		-0.0243		
4	CPS 4=	-0.1460	-0.1362	-0.1219	-0.1122	-0.0710				
5	CPS 5=	-0.1321	-0.1311	-0.1214	-0.1127	-0.0632				
6	CPS 6=	-0.0627	-0.0634	-0.0565	-0.0500	-0.0267				
7	CPS 7=	-0.0660	-0.0648	-0.0548	-0.0519	-0.0257				
8	CPS 8=	-0.0476	-0.05316	-0.0181	-0.0051	0.0323				
9	CPS 9=	-0.0476	-0.0344	-0.0049	0.0146	0.0650				
10	CPS 10=	-0.1232	-0.0452	-0.0175	0.0314	0.1015				
11	CPS 11=	-0.1014	-0.0624	-0.0043	0.0347	0.1109				
12	CPS 12=	-0.1024	-0.0767	-0.0213	0.0253	0.1024				
13	C+S13=	-0.1456	-0.0419	-0.0342	0.061	0.0823				
14	CPS14=	-0.1665	-0.0877	-0.0396	0.024	0.0735				
15	CPS15=	-0.1544	-0.0914	-0.0499	-0.0140	0.0482				
16	CPS16=	-0.1293	-0.0411	-0.0440	-0.0196	0.0337				
17	CPS17=	-0.0995	-0.0652	-0.0415	-0.0205	0.0225				
18	CPS18=	-0.0616	-0.0396	-0.0238	-0.0098	0.0225				
19	CPS19=	-0.0231	-0.0102	0.0005	0.0094	0.0323				
20	CPS20=	-0.0036	0.0038	0.0103	0.0164	0.0304				
21	CPS21=	0.0039	0.0085	0.0127	0.0169	0.0262				
22	CPS22=	0.0029	0.0048	0.0071	0.0103	0.0183				
23	CPS23=	0.0043	0.0048	0.0066	0.0089	0.0164				
24	CPS24=	-0.0003	-0.0018	0.0019	0.0033	0.0108				
25	CPS25=	-0.0329	-0.0321	-0.0303	-0.0289	-0.0257				

TEST	PART	M	PR	P	REX10-6	VN	0	TT	WING	RUN SURVEY	DATE	AEDC PROPULSION WIND TUNNEL
TF-445	10	0.820	1530.1	954.2	3.002	912.5	482.37	90.00	4 PCT	0	0	TRANSonic_16T
ALFMH	CN	CA	CLM	CLN	CLL	CAF	CAB					
-5.61	-0.5153	-0.0017	0.0211	-0.0376	-0.0005	0.0036	0.0124					0.0087
-2.29	-0.1962	-0.0005	0.0221	-0.0154	-0.0001	0.0035	0.0162					0.0086
-0.08	0.0084	0.0002	0.0272	0.0012	0.0001	0.0030	0.0183					0.0089
2.15	0.2103	0.0006	0.0236	0.0184	0.0004	0.0025	0.0144					0.0092
5.49	0.5342	0.0020	0.0180	0.0402	0.0005	0.0018	0.0080					0.0100

TEST PART N PT REX10-6 VH TT WIND RUN SURVEY DATE AEDC PROPULSION WIND TUNNEL  
 1E-442 10 0,050 1530,1 954,2 3,002 912,5 482,37 90,00 4 PCT 0 0 5-24-77 TRANSONIC 161

PRESSURE COEFFICIENTS CPS=(PS-P)/q.

BRIDGE	ALFWHM=-2,62	ALFWHM=-2,79	ALFWHM=-0,98	ALFWHM= 2,12	ALFWHM= 5,49
1 CPS 1=	0,1275	0,0699	0,0368	0,0060	-0,0348
2 CPS 2=	0,0445	-0,0061	-0,055	-0,0604	-0,0921
3 CPS 3=	-0,0237	-0,0682	-0,0936	-0,1124	-0,1284
4 CPS 4=	-0,0713	-0,094	-0,1294	-0,1407	-0,1521
5 CPS 5=	-0,0861	-0,1174	-0,1307	-0,1349	-0,1355
6 CPS 6=	-0,0219	-0,0486	-0,0283	-0,0604	-0,0581
7 CPS 7=	-0,0241	-0,0401	-0,0619	-0,0613	-0,0563
8 CPS 8=	0,0392	0,0020	0,0141	0,0236	-0,0334
9 CPS 9=	0,0741	0,0239	-0,0025	-0,0250	-0,0607
10 CPS 10=	0,1071	0,0435	0,0024	-0,0375	-0,1167
11 CPS 11=	0,1249	0,0525	-0,0007	-0,0564	-0,1669
12 CPS 12=	0,1123	0,0325	0,0186	-0,0788	-0,1996
13 CPS 13=	0,0939	0,0167	-0,0364	-0,0945	-0,2067
14 CPS 14=	0,0822	0,0100	0,0405	-0,0936	-0,1866
15 CPS 15=	0,0526	-0,0119	-0,0283	-0,1026	-0,1736
16 CPS 16=	0,0355	-0,0195	-0,0270	-0,0914	-0,1431
17 CPS 17=	0,0212	-0,0226	-0,0203	-0,0730	-0,1087
18 CPS 18=	0,0203	-0,0072	0,0280	-0,0416	-0,0634
19 CPS 19=	0,0337	0,0149	0,0029	-0,0053	-0,0173
20 CPS 20=	0,0342	0,0221	0,0149	0,0113	0,0046
21 CPS 21=	0,0311	0,0240	0,0181	0,0163	0,0127
22 CPS 22=	0,0221	0,0158	0,0127	0,0122	0,0104
23 CPS 23=	0,0203	0,0127	0,0114	0,0104	0,0104
24 CPS 24=	0,0158	0,0069	0,0047	0,0046	0,0055
25 CPS 25=	-0,0219	-0,0267	-0,0271	-0,0268	-0,0276

TEST PART M PT REX10-6 VM 0 TT WING RUN SURVEY DATE  
 TF-445 14 01920 1494.6 883.7 3.001 939.3 501.03 90.30 4 PCT 0 0 5-24-77 AEDC PROPULSION WIND TUNNEL  
 TRANSonic 161

ALFWH	CN	CY	CA	CLM	CLN	CLL	CAF	CAB
5.53	0.5627	0.0023	0.0185	0.0353	0.0005	0.0023	0.0087	0.0096
2.17	0.2216	0.0010	0.0240	0.0174	0.0003	0.0029	0.0151	0.0090
*0.08	0.0059	0.0006	0.0279	0.0011	0.0001	0.0029	0.0191	0.0086
-2.29	-0.1991	-0.0003	0.0260	-0.0145	-0.0001	0.0035	0.0174	0.0086
-5.12	-0.4944	-0.0012	0.0215	-0.0291	-0.0003	0.0038	0.0128	0.0087

TEST PART M PT P REX10-6 VM Q TT WING RUN SURVEY DATE AEDC PROPULSION WIND TUNNEL  
 TF-442 11 0.930 1494.6 803.7 3.001 959.3 501.03 90.30 4 PCT 0 0 5-24-77

PRESSURE COEFFICIENTS CPS = (PS-P)/Q

ORIFICE	ALFWHM = 5.93	ALFWHM = 2.17	ALFWHM = -0.08	ALFWHM = -2.29	ALFWHM = -5.12
1 CPS 1*	-0.3337	0.0057	0.0459	0.0704	0.1221
2 CPS 2*	-0.3942	-0.0496	-0.0433	-0.0063	0.0376
3 CPS 3*	-0.1435	-0.1230	-0.1023	-0.0779	-0.0378
4 CPS 4*	-0.1643	-0.1589	-0.1458	-0.1279	-0.0947
5 CPS 5*	-0.1427	-0.1494	-0.1470	-0.1370	-0.1128
6 CPS 6*	-0.0501	-0.0604	-0.0592	-0.0542	-0.0357
7 CPS 7*	-0.0397	-0.0539	-0.0571	-0.0512	-0.0309
8 CPS 8*	-0.0133	-0.0150	-0.0089	-0.0049	0.0350
9 CPS 9*	-0.3367	-0.0142	0.0058	0.0307	0.0734
10 CPS 10*	-0.1003	-0.0319	0.0161	0.0544	0.1174
11 CPS 11*	-0.1638	-0.0569	0.0023	0.0553	0.1247
12 CPS 12*	-0.2136	-0.0837	-0.0466	0.0406	0.1126
13 CPS 13*	-0.2469	-0.1105	-0.0403	0.0178	0.0894
14 CPS 14*	-0.2564	-0.1183	-0.0498	0.0662	0.0760
15 CPS 15*	-0.2612	-0.1299	-0.0700	-0.0188	0.0437
16 CPS 16*	-0.1764	-0.1222	-0.0756	-0.0326	0.0230
17 CPS 17*	-0.1202	-0.0949	-0.0683	-0.0382	0.0044
18 CPS 18*	-0.0631	-0.0466	-0.0356	-0.0184	0.0079
19 CPS 19*	-0.0099	0.0001	0.0053	0.0143	0.0290
20 CPS 20*	0.0165	0.0225	0.0247	0.0286	0.0355
21 CPS 21*	0.0247	0.0269	0.0281	0.0316	0.0355
22 CPS 22*	0.0208	0.0212	0.0213	0.0238	0.0264
23 CPS 23*	0.0167	0.0174	0.0174	0.0200	0.0234
24 CPS 24*	0.0126	0.0109	0.0105	0.0122	0.0178
25 CPS 25*	-0.0220	-0.0215	-0.0218	-0.0210	-0.0164

TEST PART M PT P REV10-6 VM 0 TT WING RUN SURVEY DATE AEDC PROPULSION WIND TUNNEL  
 TF-445 12 0,923 1477,3 051,5 2,995 980,6 508,11 90,30 4 PCT 0 0 5-24-77 TRANSN1Q 167

ALFVM	CN	CY	CA	CLM	CLN	CLL	CAF	CAB
-5,16	-0,5302	-0,0011	0,0206	-0,0152	-0,0004	0,0042	0,0118	0,0068
-2,30	-0,2081	-0,0000	0,0255	-0,0119	-0,0000	0,0033	0,0168	0,0088
*0,08	0,0078	0,0006	0,0275	0,0021	0,0001	0,0029	0,0187	0,0088
2,48	0,2320	0,0011	0,0236	0,0162	0,0004	0,0026	0,0146	0,0090
4,89	0,5356	0,0013	0,0174	0,0211	0,0010	0,0047	0,0079	0,0095

TEST PART N PT P REX10-6 VM 0 TT WING RUN SURVEY DATE AEDC PROPULSION WIND TUNNEL  
 TE-445 12 0.923 1477.3 051.5 2.995 980.6 508.11 90.30 4 PCT 0 0 5-24-77 TRANSONIC 1A1

PRESSURE COEFFICIENTS CPS=(PS-P)/Q

ORIFICE	ALFWHM=5.16	ALFWHM=2.30	ALFWHM=-0.08	ALFWHM= 2.18	ALFWHM= 4.89
1 CPS 1	0.1277	0.0824	0.0465	0.0143	-0.0227
2 CPS 2	0.0402	-0.0035	-0.0336	-0.0607	-0.0878
3 CPS 3	-0.0411	-0.0797	-0.1052	-0.1276	-0.1464
4 CPS 4	-0.1004	0.1338	-0.1514	-0.1674	-0.1758
5 CPS 5	-0.1226	-0.1487	-0.1590	-0.1628	-0.1524
6 CPS 6	-0.0361	-0.0560	-0.0607	-0.0598	-0.0499
7 CPS 7	-0.0301	-0.0517	-0.0548	-0.0514	-0.0355
8 CPS 8	-0.0401	-0.0752	-0.039	-0.0027	-0.0027
9 CPS 9	0.0820	0.0308	0.0130	-0.0014	-0.0214
10 CPS 10	0.1171	0.0685	0.0262	-0.0171	-0.0699
11 CPS 11	0.1344	0.0651	0.0130	-0.0463	-0.1277
12 CPS 12	0.1222	0.0477	-0.0094	-0.0789	-0.1766
13 CPS 13	0.0972	0.0240	-0.0353	-0.1064	-0.2106
14 CPS 14	0.0799	0.0113	-0.0484	-0.1213	-0.2255
15 CPS 15	0.0460	-0.0208	-0.072	-0.1488	-0.2553
16 CPS 16	0.0215	-0.0395	-0.0904	-0.1560	-0.2752
17 CPS 17	-0.0014	-0.0505	-0.0874	-0.1251	-0.2544
18 CPS 18	0.0029	-0.0268	-0.0433	-0.0501	-0.0593
19 CPS 19	0.0308	0.0143	0.079	0.0075	0.0147
20 CPS 20	0.0431	0.0329	0.0304	0.0316	0.0406
21 CPS 21	0.0443	0.0350	0.0346	0.0346	0.0453
22 CPS 22	0.0350	0.0266	0.0262	0.0291	0.0355
23 CPS 23	0.0291	0.0219	0.0206	0.0223	0.0279
24 CPS 24	0.0211	0.0147	0.0139	0.0139	0.0185
25 CPS 25	-0.0162	-0.0196	-0.0192	-0.0192	-0.0163

TEST PAHT M PI P Wt x 10<sup>-6</sup> VN 0 IT WING RUN SURVEY DATE  
TR=445 13 0.950 1470.5 822.2 3.010 1005.2 519.98 90.40 4 PCT 7 701 4-12-77

AEDC PROPULSION WIND TUNNEL

TRANSONIC TAT

AEFRM	CN	CY	CA	CLL	CLN	CLL	CAF	CAF	CAH
5.02	0.5710	0.0027	0.0222	0.0026	0.0004	0.0024	0.0127	0.0095	
2.18	0.2430	0.0013	0.0270	0.0072	0.0004	0.0023	0.0180	0.0090	
-0.07	0.0063	0.0008	0.0300	0.0019	0.0002	0.0025	0.0211	0.0089	
-2.31	-0.2160	0.0000	0.0290	-0.0061	-0.0001	0.0037	0.0202	0.0089	
-5.15	-0.5424	-0.0010	0.0262	0.0017	-0.0002	0.0031	0.0175	0.0087	

TEST	PAHT	N	P1	P2	MEAN U-n	Vn	TT	WIND SURVEY	DATE	AEDC PROPULSION WIND TUNNEL
TF=445	13	0.950	1.470.5	H22.2	3.010	105.2	519.9A	90.40	4-PCT	7 701 4-12-77
DRIFTCE			ALF M=2.072	ALF M=2.018	ALF M=0.07	ALF M=-2.31	ALF M=-5.15			
1	CPS 1=	-0.0152	U. 0154	0. 0154	0. 01471	0. 0811	0. 1314			
2	CPS 2=	0.0547	-U. 0579	-U. 0579	-U. 0324	-U. 0016	0. 0445			
3	CPS 3=	-0.1234	-U. 1342	-U. 1342	-U. 1134	-U. 0858	-0. 0456			
4	CPS 4=	-0.1642	-U. 1641	-U. 1641	-U. 1477	-U. 1477	-0. 1129			
5	CPS 5=	-0.1490	-U. 2244	-U. 2244	-U. 2244	-U. 2010	-0. 1648			
6	CPS 6=	-0.0330	-U. 0412	-U. 0412	-U. 0463	-U. 0414	-0. 0323			
7	CPS 7=	-0.0149	-U. 0366	-U. 0366	-U. 0450	-U. 0335	-0. 0240			
8	CPS 8=	0.0150	U. 0038	U. 0038	U. 0033	U. 0163	0. 0466			
9	CPS 9=	0.0033	U. 0000	U. 0000	U. 0196	U. 0458	0. 0594			
10	CPS10=	-0.0420	-U. 0104	-U. 0104	-U. 0355	-U. 0742	0. 1297			
11	CPS11=	-0.1094	-U. 0366	-U. 0366	-U. 0175	U. 0748	0. 1422			
12	CPS12=	-0.7622	-U. 6687	-U. 6687	-U. 0046	U. 0557	0. 1297			
13	CPS13=	-0.1491	-U. 1024	-U. 1024	-U. 0350	U. 0279	0. 1015			
14	CPS14=	-0.2167	-U. 1199	-U. 1199	-U. 0513	U. 0113	0. 0432			
15	CPS15=	-0.2477	-U. 1507	-U. 1507	-U. 0809	-U. 0223	0. 0458			
16	CPS16=	-0.2707	-U. 1765	-U. 1765	-U. 1080	-U. 0509	0. 0105			
17	CPS17=	-0.2958	-U. 2053	-U. 2053	-U. 1416	-U. 0896	-0. 0319			
18	CPS18=	-0.3164	-U. 1694	-U. 1694	-U. 1064	-U. 0783	-0. 0473			
19	CPS19=	-0.0671	-U. 0012	-U. 0012	U. 0054	U. 0034	-0. 0011			
20	CPS20=	0.0506	U. 0471	U. 0471	U. 0346	U. 0363	0. 0309			
21	CPS21=	0.0640	U. 0529	U. 0529	U. 0451	U. 0458	0. 0437			
22	CPS22=	0.0671	U. 0621	U. 0621	U. 0359	U. 0366	U. 0408			
23	CPS23=	0.0464	U. 0313	U. 0313	U. 0294	U. 0292	U. 0371			
24	CPS24=	0.0304	U. 0200	U. 0200	U. 0188	U. 0209	U. 0288			
25	CPS25=	-0.0076	-U. 0150	-U. 0150	-U. 0163	-U. 0148	-0. 0099			

EUD PROPULSION WIND TUNNEL

TEST PART P MEXICO CITY WING MUN SURVEY DATE AEDC PROPULSION WIND TUNNEL  
TP-465 14 0.414 T451.1 730.0 2.446 1.025.0 524.5H 50.30 4 PCT 7 701 4-12-77 TRANSONIC 16T

ORIFICE	ALF <sub>W</sub> =-0.01	ALF <sub>W</sub> =-0.02	ALF <sub>W</sub> =-0.03	ALF <sub>W</sub> =-0.04	ALF <sub>W</sub> =-0.05	ALF <sub>W</sub> =-0.06	ALF <sub>W</sub> =-0.07	ALF <sub>W</sub> =-0.08	ALF <sub>W</sub> =-0.09	ALF <sub>W</sub> =-0.10	ALF <sub>W</sub> =-0.11	ALF <sub>W</sub> =-0.12	ALF <sub>W</sub> =-0.13
1 CPS 1	0.14/4	0.190/	0.06/0	0.06/0	0.06/0	0.06/0	0.06/0	0.06/0	0.06/0	0.06/0	0.06/0	0.06/0	0.06/0
2 CPS 2	0.05/4	0.07176	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170	-0.0170
3 CPS 3	-0.05/4	0.07461	0.07461	0.07461	0.07461	0.07461	0.07461	0.07461	0.07461	0.07461	0.07461	0.07461	0.07461
4 CPS 4	-0.10/5	0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452	-0.1452
5 CPS 5	-0.11/31	-0.2012	-0.2012	-0.2012	-0.2012	-0.2012	-0.2012	-0.2012	-0.2012	-0.2012	-0.2012	-0.2012	-0.2012
6 CPS 6	-0.22/04	-0.24/0	-0.24/0	-0.24/0	-0.24/0	-0.24/0	-0.24/0	-0.24/0	-0.24/0	-0.24/0	-0.24/0	-0.24/0	-0.24/0
7 CPS 7	-0.00/05	-0.1013	-0.1013	-0.1013	-0.1013	-0.1013	-0.1013	-0.1013	-0.1013	-0.1013	-0.1013	-0.1013	-0.1013
8 CPS 8	0.05/1	0.70547	-0.70547	-0.70547	-0.70547	-0.70547	-0.70547	-0.70547	-0.70547	-0.70547	-0.70547	-0.70547	-0.70547
9 CPS 9	0.11/05	0.0773	0.0773	0.0773	0.0773	0.0773	0.0773	0.0773	0.0773	0.0773	0.0773	0.0773	0.0773
10 CPS 10	0.13/5	0.1624	-0.1624	-0.1624	-0.1624	-0.1624	-0.1624	-0.1624	-0.1624	-0.1624	-0.1624	-0.1624	-0.1624
11 CPS 11	0.16/0	0.0462	-0.0462	-0.0462	-0.0462	-0.0462	-0.0462	-0.0462	-0.0462	-0.0462	-0.0462	-0.0462	-0.0462
12 CPS 12	0.14/4	0.07459	-0.07459	-0.07459	-0.07459	-0.07459	-0.07459	-0.07459	-0.07459	-0.07459	-0.07459	-0.07459	-0.07459
13 CPS 13	0.14/0	0.04748	-0.04748	-0.04748	-0.04748	-0.04748	-0.04748	-0.04748	-0.04748	-0.04748	-0.04748	-0.04748	-0.04748
14 CPS 14	0.13/17	0.07297	-0.07297	-0.07297	-0.07297	-0.07297	-0.07297	-0.07297	-0.07297	-0.07297	-0.07297	-0.07297	-0.07297
15 CPS 15	0.06/16	-0.0664	-0.0664	-0.0664	-0.0664	-0.0664	-0.0664	-0.0664	-0.0664	-0.0664	-0.0664	-0.0664	-0.0664
16 CPS 16	0.02/5	-0.0364	-0.0364	-0.0364	-0.0364	-0.0364	-0.0364	-0.0364	-0.0364	-0.0364	-0.0364	-0.0364	-0.0364
17 CPS 17	-0.00/01	-0.0756	-0.0756	-0.0756	-0.0756	-0.0756	-0.0756	-0.0756	-0.0756	-0.0756	-0.0756	-0.0756	-0.0756
18 CPS 18	-0.07/3	-0.1226	-0.1226	-0.1226	-0.1226	-0.1226	-0.1226	-0.1226	-0.1226	-0.1226	-0.1226	-0.1226	-0.1226
19 CPS 19	-0.11/36	-0.1571	-0.1571	-0.1571	-0.1571	-0.1571	-0.1571	-0.1571	-0.1571	-0.1571	-0.1571	-0.1571	-0.1571
20 CPS 20	-0.11/45	-0.0288	-0.0288	-0.0288	-0.0288	-0.0288	-0.0288	-0.0288	-0.0288	-0.0288	-0.0288	-0.0288	-0.0288
21 CPS 21	-0.01/22	0.0429	-0.0429	-0.0429	-0.0429	-0.0429	-0.0429	-0.0429	-0.0429	-0.0429	-0.0429	-0.0429	-0.0429
22 CPS 22	0.01/11	0.0474	-0.0474	-0.0474	-0.0474	-0.0474	-0.0474	-0.0474	-0.0474	-0.0474	-0.0474	-0.0474	-0.0474
23 CPS 23	0.05/5	0.0445	-0.0445	-0.0445	-0.0445	-0.0445	-0.0445	-0.0445	-0.0445	-0.0445	-0.0445	-0.0445	-0.0445
24 CPS 24	0.03/1	0.0334	-0.0334	-0.0334	-0.0334	-0.0334	-0.0334	-0.0334	-0.0334	-0.0334	-0.0334	-0.0334	-0.0334
25 CPS 25	0.01/2	-0.0094	-0.0094	-0.0094	-0.0094	-0.0094	-0.0094	-0.0094	-0.0094	-0.0094	-0.0094	-0.0094	-0.0094

TEST	PART	M	PT	MEALU-b	V <sub>m</sub>	T <sub>1</sub>	WING	MUN SURVEY	DATE	AEDC PROPULSION WIND TUNNEL
TR-465	75	1.001	1465.1	762.3	3.001	1049.6	534.0	4 PCT	7	701 4-12-77 TRANSONIC 1ST
ALPHAB	CLN	CF	CA	CLN	CLN	CLL	CAF	CAF	CAF	CAF
5.04	0.590A	0.0026	0.0382	-0.0252	0.0004	0.0022	0.0235	0.0147		
2.19	0.252A	0.0015	0.0416	-0.0059	0.0003	0.0022	0.0298	0.0118		
-0.06	0.0110	0.000A	0.0451	0.0013	0.0001	0.0024	0.0331	0.0119		
-2.32	-0.2266	0.0001	0.0462	0.0093	-0.0000	0.0031	0.0332	0.0130		
-5.15	-0.5532	-0.0007	0.0429	0.0270	-0.0003	0.0038	0.0292	0.0147		



TEST PANT # PT METAL-U-6 VM TT WING HIND SURVEY DATE AEDC PROPULSION WIND TUNNEL  
 TR-2029 TS-13.9 736.2 2.594 1070.6 540.65 90.90 4 PCT 7 701 4-12-77 TRANSONIC 16T

ALPHA	CL	CY	CA	CLM	CLN	CLL	CAF	CAR
-5.15	-0.5500	-0.0000	0.0456	0.0294	-0.0034	0.0296	0.0160	
-2.33	-0.2200	0.0001	0.0500	0.0104	0.0001	0.0027	0.0333	0.0155
-0.07	0.0100	0.0000	0.0500	0.0017	0.0001	0.0027	0.0344	0.0156
2.19	0.2510	0.0016	0.0477	-0.0066	0.0004	0.0017	0.0316	0.0160
5.06	0.5867	0.0024	0.0427	-0.0273	0.0005	0.0018	0.0251	0.0176

TEST	PART	#	H	V	W	WING	RUN SURVEY	DATE	AEDC PROPULSION WIND TUNNEL
TF=445	T6	T.074	1.333.9	716.2	2.936	1.070.6	54.0.65	4.0.90	4 PC1 7 701 4-12-77 TRANSONIC 161
ORIFICE			PRESSURE	CURRENTS	CPS 2-12-1/4	CPS 2-12-1/4	ALFWMA=0.07	ALFWMA=2.19	ALFWMA=5.06
1	CPS 1=	0.14H4	0.1537	0.1229	0.0916	0.0535			
2	CPS 2=	0.1054	0.0663	0.0341	0.0143	-0.0152			
3	CPS 3=	0.0194	-0.0128	0.0136	-0.0570	-0.0843			
4	CPS 4=	-0.0564	-0.0460	-0.1045	-0.1149	-0.1406			
5	CPS 5=	-0.1215	-0.1449	-0.1592	-0.1753	-0.1438			
6	CPS 6=	-0.1604	-0.1460	-0.1994	-0.1996	-0.1498			
7	CPS 7=	-0.1192	-0.1644	-0.1835	-0.1741	-0.1662			
8	CPS 8=	-0.1203	-0.1221	-0.1839	-0.1060	-0.0811			
9	CPS 9=	0.0677	-0.0658	-0.0710	-0.0510	0.0176			
10	CPS10=	0.1763	0.0934	0.1431	0.0231	0.0276			
11	CPS11=	0.2096	0.1214	0.0666	0.0711	-0.0244			
12	CPS12=	0.1568	0.1126	0.0449	-0.0060	-0.0735			
13	CPS13=	0.1763	0.0926	0.0307	-0.0299	-0.1059			
14	CPS14=	0.1587	0.0757	0.0164	-0.0442	-0.1235			
15	CPS15=	0.1414	0.0471	-0.0164	-0.0757	-0.1542			
16	CPS16=	0.0448	0.0208	-0.0399	-0.0984	-0.1750			
17	CPS17=	0.0461	-0.0147	-0.0674	-0.1251	-0.1998			
18	CPS18=	-0.0044	-0.0563	-0.1073	-0.1586	-0.2293			
19	CPS19=	-0.0457	-0.0954	-0.1448	-0.1944	-0.2589			
20	CPS20=	-0.0510	-0.1243	-0.1312	-0.2146	-0.2881			
21	CPS21=	-0.0505	-0.0602	-0.0650	-0.0928	-0.1410			
22	CPS22=	-0.0425	-0.0239	-0.0112	-0.0108	-0.0196			
23	CPS23=	-0.0213	0.0072	0.0148	0.0143	0.0156			
24	CPS24=	-0.0096	0.0104	0.0152	0.0135	0.0136			
25	CPS25=	-0.0209	-0.0096	-0.0064	-0.0104	-0.0128			

TEST PART M PT P MEA10-6 Vn IT dING RUN SURVEY DATE  
 TF-445 17 1.051 1.026.7 710.3 3.080 1.093.3 449.06 90.80 a PCT 7 701 4-12-77 AEDC PROPULSION WIND TUNNEL TRANSONIC 16T

ALFAH	Cn	Cf	Clf	CLn	CLL	CAF	CAF
5.06	0.5775	0.0026	0.0465	-0.0244	0.0003	0.0019	0.0261
2.21	0.2564	0.0013	0.0497	-0.0097	0.0004	0.0021	0.0318
-0.07	0.0115	0.0006	0.0520	0.0005	0.0002	0.0023	0.0174
-2.31	-0.2214	-0.0002	0.0502	0.0128	0.0001	0.0031	0.0350
-5.16	-0.5454	-0.0010	0.0474	0.0340	-0.0002	0.0039	0.0170
						0.0039	0.0163
						0.0310	0.0164

TEST	PART	HT	WT	R	HT10-6	V1	HT	WING SURVEY	DATE	AEDC PROPULSION WIND TUNNEL
TF-445	17	1.051	1.028	1.710	0.3	3.000	1.041	0.549	0.66	4-12-77
ORIFICE		PRESSURE	SUM	CORR	IGNITNS	U <sub>15</sub> = (U <sub>5</sub> -P <sub>1</sub> )/3	ALFWM=	ALFWM=	ALFWM=	TRANSonic 167
1	CPS 1=	0.0525	0.0061	0.1142	0.1142	0.1524	0.1524	0.1999	0.1999	
2	CPS 2=	-0.0045	0.0702	0.0402	0.0402	0.0743	0.0743	0.1169	0.1169	
3	CPS 3=	-0.0670	-0.0491	0.0279	0.0279	0.0627	0.0627	0.0312	0.0312	
4	CPS 4=	-0.1231	-0.1144	0.0975	0.0975	0.0789	0.0789	-0.0495	-0.0495	
5	CPS 5=	-0.1644	-0.1609	0.1447	0.1447	0.1353	0.1353	-0.1120	-0.1120	
6	CPS 6=	-0.1795	-0.1497	0.1495	0.1495	0.1619	0.1619	-0.1671	-0.1671	
7	CPS 7=	-0.1534	-0.1645	0.1644	0.1644	0.1705	0.1705	-0.1687	-0.1687	
8	CPS 8=	-0.0903	-0.1053	0.1053	0.1053	0.1128	0.1128	-0.1105	-0.1105	
9	CPS 9=	-0.0363	-0.0702	0.0706	0.0706	0.0865	0.0865	-0.0865	-0.0865	
10	CPS 10=	0.0040	-0.0134	0.0046	0.0046	0.0356	0.0356	0.1511	0.1511	
11	CPS 11=	-0.0296	0.0004	0.0461	0.0461	0.0995	0.0995	0.1956	0.1956	
12	CPS 12=	-0.0741	-0.0173	0.0426	0.0426	0.1047	0.1047	0.1991	0.1991	
13	CPS 13=	-0.1042	-0.0422	0.0201	0.0201	0.0865	0.0865	0.1771	0.1771	
14	CPS 14=	-0.1151	-0.0560	0.0664	0.0664	0.0747	0.0747	0.1622	0.1622	
15	CPS 15=	-0.1412	-0.0717	0.0168	0.0168	0.0502	0.0502	0.1327	0.1327	
16	CPS 16=	-0.1574	-0.1009	0.0416	0.0416	0.1031	0.1031	0.1035	0.1035	
17	CPS 17=	-0.1741	-0.1230	0.0600	0.0600	0.0007	0.0007	0.0642	0.0642	
18	CPS 18=	-0.2043	-0.1447	0.0967	0.0967	0.0374	0.0374	0.0209	0.0209	
19	CPS 19=	-0.2321	-0.1751	0.1266	0.1266	0.0730	0.0730	-0.0192	-0.0192	
20	CPS 20=	-0.2055	-0.1969	0.1211	0.1211	0.173	0.173	-0.0597	-0.0597	
21	CPS 21=	-0.1613	-0.0970	0.0700	0.0700	0.0619	0.0619	-0.0491	-0.0491	
22	CPS 22=	-0.0410	-0.0169	0.0157	0.0157	0.0355	0.0355	-0.0385	-0.0385	
23	CPS 23=	0.0142	0.0150	0.0131	0.0131	0.0074	0.0074	-0.0184	-0.0184	
24	CPS 24=	0.0162	0.0131	0.0139	0.0139	0.0031	0.0031	-0.0129	-0.0129	
25	CPS 25=	-0.0106	-0.0082	-0.0074	-0.0074	-0.0193	-0.0193	-0.0223	-0.0223	

TEST	PART	M	P1	P	MtA10-h	V <sup>M</sup>	W	H	WIND	HUN SURVEY	DATE	AEDC PROPULSION WIND TUNNEL
TF-605	TA	1.100	1413.5	661.7	3.005	1133.2	564.84	69.20	4 PCT	7 701	4-12-77	TRANSonic 16T
AEFAM	CN	CA	CLM	CLN	CLL	CAF	CAH					
-0.016	-0.5367	-0.0016	0.0475	0.0429	-0.0004	0.0039	0.0015					
-26.33	-0.22296	0.0004	0.0500	0.0177	-0.0007	0.0033	0.0341					
-0.08	0.0046	0.0009	0.0510	0.0014	-0.0006	0.0027	0.0347					
-2.19	0.2877	0.0073	0.0499	-0.0146	-0.0003	0.0022	0.0327					
5.02	0.5569	0.0025	0.0462	-0.0373	-0.0003	0.0012	0.0281					

TEST PART PT MCALUM WIT IT WINDS MUN SURVEY DATE AEDC PROPULSION WIND TUNNEL  
TP-445 LN 14100 14135 651.1 3.005 1133.2 360.04 49.20 4 WCT 7 701 4-12-77 TRANSONIC 161

ORIFICE	4LP <sub>max</sub> =2.16	PRESSURE COEFFICIENTS	CPS=(P <sub>5-6</sub> )/Q	ALF <sub>max</sub> =2.33		ALFW <sub>max</sub> =0.08	ALFW <sub>max</sub> =2.19	ALFW <sub>max</sub> =5.02
				0.1170	0.1174			
1 CPS 1=	0.2151	0.1367	0.1011	-0.0809	-0.0407	0.0791	0.0529	0.0117
2 CPS 2=	0.1367	0.0946	0.0321	0.0017	-0.0191	-0.0426	-0.0426	
3 CPS 3=	0.0946	0.0744	0.0049	-0.0039	-0.0790	-0.0957	-0.0957	
4 CPS 4=	-0.0149	-0.0149	-0.0497	-0.0426	-0.1160	-0.1276	-0.1362	
5 CPS 5=	-0.0426	-0.0426	-0.1512	-0.1573	-0.1624	-0.1601	-0.1601	
6 CPS 6=	-0.1464	-0.1464	-0.1583	-0.1472	-0.1481	-0.1369	-0.1369	
7 CPS 7=	-0.1464	-0.1464	-0.1042	-0.0975	-0.0971	-0.0842	-0.0842	
8 CPS 8=	-0.1035	-0.1035	-0.0957	-0.0801	-0.0728	-0.0561	-0.0561	
9 CPS 9=	-0.0947	-0.0947	-0.0457	-0.0431	-0.0369	-0.0241	-0.0241	
10 CPS10=	-0.0740	-0.0740	-0.0416	-0.0425	-0.0425	-0.0372	-0.0372	
11 CPS11=	0.1610	0.1610	0.0420	0.0420	-0.076	-0.076	-0.076	
12 CPS12=	0.2014	0.2014	0.1057	0.1057	-0.0130	-0.0130	-0.0130	
13 CPS13=	0.1915	0.1915	0.1076	0.0430	-0.0257	-0.0257	-0.0257	
14 CPS14=	0.1835	0.1835	0.1069	0.0341	-0.0323	-0.1042	-0.1042	
15 CPS15=	0.1566	0.0791	0.0110	-0.0570	-0.1285	-0.1285	-0.1285	
16 CPS16=	0.1317	0.0572	0.0110	-0.0755	-0.1416	-0.1416	-0.1416	
17 CPS17=	0.0975	0.0314	0.073	-0.0947	-0.1604	-0.1604	-0.1604	
18 CPS18=	0.0771	0.0079	0.0701	-0.1269	-0.1466	-0.1466	-0.1466	
19 CPS19=	0.0143	-0.0449	0.1032	-0.1547	-0.2097	-0.2097	-0.2097	
20 CPS20=	-0.0244	-0.0442	-0.1387	-0.1871	-0.2425	-0.2425	-0.2425	
21 CPS21=	-0.0376	-0.0722	-0.1052	-0.1381	-0.1916	-0.1916	-0.1916	
22 CPS22=	-0.0344	-0.0368	-0.0415	-0.0458	-0.0676	-0.0676	-0.0676	
23 CPS23=	-0.0374	-0.0268	-0.0091	0.0144	0.0133	0.0133	0.0133	
24 CPS24=	-0.0194	-0.0066	0.0129	0.0260	0.0287	0.0287	0.0287	
25 CPS25=	-0.0344	-0.0102	0.0032	0.0060	0.0067	0.0067	0.0067	

TEST PART # 19 10151 1008.9 618.6 3.007 1175.5 574.03 89.76 4 PCT 7 701 4-12-77 AEUC PROPULSION WIND TUNNEL TRANSONIC 16T

ALFEM	CN	CF	CA	CLM	CLN	CLL	CAF	CAH
5.01	0.5345	0.0012	0.0465	-0.0425	0.0003	0.0021	0.0249	0.0179
2.20	0.7356	0.0025	0.0692	-0.0153	0.0003	0.0025	0.0325	0.0166
-0.08	0.0077	0.0016	0.0514	0.0029	0.0003	0.0029	0.0345	0.0169
-2.31	-0.2142	0.0011	0.0499	0.0222	0.0001	0.0032	0.0335	0.0163
-5.12	-0.5064	0.0004	0.0474	0.0481	-0.0002	0.0031	0.0314	0.0160

TEST	POINT	W	H	MATERIAL	V	IT	MIN	RUN SURVEY	DATE	AEDC PROPULSION WIND TUNNEL
		15	15	100-9	61-6	3-007	11-15-6	5-4-03	49-70 & PCT	TRANSonic-16T
0111CF				WOOD	CUT & GLUED	UPN= (P5-M) / 0				
1	CPS 1=	6.0e-11		6.0001		0.1135		0.1378		0.1194
2	CPS 2=	6.0e-10		0.0000		0.0693		0.1004		0.1456
3	CPS 3=	-0.0e+0		-0.0190		0.0044		0.0323		0.0707
4	CPS 4=	6.0e-10		0.0013		-0.0013		0.0446		0.0114
5	CPS 5=	-0.0e+0		-0.0204		-0.1136		-0.1000		-0.0537
6	CPS 6=	-0.1e+0		-0.1549		-0.1529		-0.1452		-0.1284
7	CPS 7=	-0.1e+0		-0.1417		-0.1408		-0.1394		-0.1340
8	CPS 8=	-0.0e+0		-0.0960		-0.0951		-0.0947		-0.0934
9	CPS 9=	-0.0e+0		-0.0741		-0.0749		-0.0804		-0.0825
10	CPS 10=	-0.0e+0		-0.0382		-0.0464		-0.0666		-0.0629
11	CPS 11=	-0.0e+0		-0.0137		0.0104		0.0334		0.0906
12	CPS 12=	-0.0e+0		-0.0156		0.0346		0.0443		0.1783
13	CPS 13=	-0.0e+0		-0.0371		0.0274		0.0794		0.1763
14	CPS 14=	-0.0e+0		-0.0466		0.0225		0.0805		0.1734
15	CPS 15=	-0.0e+0		-0.0590		0.0253		0.0689		0.1520
16	CPS 16=	-0.0e+0		-0.0737		-0.0103		0.0512		0.1328
17	CPS 17=	-0.0e+0		-0.0903		-0.0268		0.0293		0.1109
18	CPS 18=	-0.0e+0		-0.1047		-0.0461		0.0112		0.0842
19	CPS 19=	-0.0e+0		-0.1251		-0.0695		-0.0171		0.0515
20	CPS 20=	-0.0e+0		-0.1553		-0.1031		-0.0547		0.0127
21	CPS 21=	-0.0e+0		-0.1280		-0.0914		-0.0612		-0.0027
22	CPS 22=	-0.0e+0		-0.0512		-0.0239		-0.0118		0.0026
23	CPS 23=	0.0e+0		0.0222		0.0101		0.0078		-0.0087
24	CPS 24=	0.0e+0		0.0448		0.0339		0.0169		-0.0016
25	CPS 25=	0.0e+0		0.0331		0.0271		0.0142		-0.0095

TEST PAMI FLEXI-6 ALFAW 4.00 7 MIN SURVEY  
TF=445 59 3.00A -0.014 PCT 4.00 -1.02 4 20H

TUNNEL FLOWFIELD SURVEY SUMMARY

POINT GP	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z	PTL/PT	CPL	UL/VW	VL/VW	WL/VW	AAL	SIL
1	60	14.954	0.926	991.61	1515.4	522.7	106.4	0.894	0.97	1.000	0.058	0.971	0.008	0.012	0.72	0.49																
2	60	128.658	0.525	991.34	1515.5	522.4	100.3	0.893	0.97	1.001	0.064	0.966	0.004	0.015	0.91	0.48																
3	60	18.341	0.425	991.61	1515.9	522.5	100.4	0.898	0.97	1.001	0.070	0.965	0.004	0.017	1.17	0.46																
4	60	156.003	0.726	991.84	1515.5	522.5	100.6	0.894	0.97	1.000	0.059	0.970	0.005	0.028	1.62	0.31																
5	60	17.654	0.926	991.72	1513.9	522.9	100.5	0.916	0.99	1.001	0.018	0.991	0.011	0.037	2.16	0.64																
6	60	177.331	0.625	991.16	1513.1	521.4	100.5	0.939	1.01	1.000	-0.026	1.012	0.009	0.042	2.37	0.49																
7	60	16.946	0.925	991.31	1512.6	521.4	100.4	1.004	1.07	1.000	-0.142	1.071	0.004	0.038	2.03	0.23																
8	60	156.644	0.926	991.61	1513.0	521.0	100.4	1.008	1.07	0.999	-0.150	1.074	0.001	0.025	1.31	0.04																
9	60	16.346	0.925	990.52	1512.9	521.1	100.1	1.006	1.07	1.002	-0.146	1.074	-0.000	0.014	0.76	-0.01																
10	60	16.002	0.925	991.61	1513.7	521.7	100.6	0.986	1.06	1.000	-0.114	1.057	-0.001	0.006	0.30	-0.05																
11	60	15.665	0.922	991.40	1514.0	521.9	100.4	0.984	1.05	1.000	-0.107	1.053	-0.004	0.003	-0.15	-0.23																
12	60	15.337	0.925	990.63	1513.6	521.6	100.1	0.969	1.04	1.001	-0.040	1.040	-0.002	0.000	-0.45	-0.09																
13	60	14.945	0.925	991.37	1514.3	521.9	100.5	0.965	1.04	1.001	-0.070	1.036	-0.001	0.014	-0.79	-0.05																
14	60	14.671	0.925	991.15	1514.6	521.9	100.5	0.940	1.01	1.009	-0.028	1.014	0.001	0.020	-1.15	0.06																
15	60	14.315	0.925	991.89	1514.8	521.4	100.4	0.935	1.01	0.994	-0.022	1.009	0.004	0.031	-1.74	0.20																
16	60	14.001	0.924	990.80	1516.4	521.4	100.0	0.933	1.01	1.000	-0.015	1.007	0.005	0.030	-1.70	0.31																
17	60	13.644	0.925	991.31	1515.9	522.5	100.4	0.927	1.00	1.001	-0.002	1.001	0.011	0.011	-0.35	-0.03	0.62															
18	60	13.340	0.925	991.60	1515.0	521.9	100.6	0.917	0.99	1.000	0.015	0.992	0.016	0.037	-2.16	0.95																
19	60	13.092	0.925	991.16	1514.6	521.9	100.4	0.912	0.99	1.001	0.025	0.987	0.022	0.036	-2.09	1.30																
20	60	12.863	0.926	991.72	1513.9	522.0	100.5	0.906	0.98	1.000	0.036	0.981	0.030	0.030	-1.74	1.72																
21	60	12.537	0.923	991.27	1512.4	521.4	100.4	0.903	0.98	1.001	0.042	0.979	0.032	0.023	-1.37	1.85																
22	60	12.016	0.925	991.57	1513.0	521.0	100.4	0.902	0.98	0.999	0.042	0.974	0.031	0.018	-1.03	1.82																
23	60	11.646	0.925	991.15	1512.0	521.0	100.4	0.903	0.98	1.000	0.041	0.979	0.028	0.010	-0.58	1.64																
24	60	11.345	0.925	991.16	1515.2	521.4	100.1	0.905	0.98	1.001	0.038	0.981	0.025	0.008	-0.48	1.46																
25	60	11.004	0.925	990.89	1517.7	522.9	100.3	0.907	0.98	1.001	0.034	0.983	0.022	0.005	-0.32	1.25																
26	60	10.648	0.925	991.05	1518.7	523.4	100.1	0.909	0.98	1.000	0.032	0.984	0.019	0.004	-0.20	1.09																
27	60	10.337	0.926	991.75	1514.2	523.6	100.2	0.910	0.99	1.000	0.029	0.985	0.016	0.002	-0.09	1.02																
28	60	9.972	0.926	991.91	1516.6	523.1	100.4	0.914	0.99	1.000	0.023	0.989	0.016	0.000	-0.00	0.94																

4-13-77

UARL AEIC PROPULSION WIND TUNNEL  
TRANSONIC TAT

TEST PART HEXI-6 ALFAIN 14140 Y 4.00 -0.0A6 6 20A  
TF-665 77 2.900 5.054 PCT DATE 4-14-77 AEDC PROPULSION WIND TUNNEL  
TRANSONIC 1ST

INNER FLOWFIELD SURVEY SUMMARY

POINT GP	A	H	V <sub>1</sub>	PT	G	T <sub>1</sub>	NL	VML/VM	PTL/PT	CPL	UL/VN	VL/VM	AAI	SWL	
5	1	1.9.014	0.927	943.25	1414.1	513.2	90.4	0.901	0.98	1.001	0.049	0.974	0.035	3.50	
7	2	1.8.649	0.926	942.69	1414.1	513.5	90.2	0.991	0.97	1.001	0.065	0.965	0.038	2.25	
9	3	1.8.347	0.925	942.28	1414.1	513.4	90.4	0.890	0.97	1.001	0.067	0.964	0.036	3.56	
11	4	1.4.014	0.926	942.85	1414.1	511.4	90.0	0.888	0.96	0.999	0.071	0.961	0.049	2.92	
13	5	1.7.688	0.925	942.30	1414.9	507.0	90.1	0.901	0.94	0.993	0.035	0.978	0.060	3.58	
15	6	1.7.356	0.926	942.08	1410.7	502.5	90.0	0.934	1.01	0.993	-0.019	1.005	0.057	3.54	
17	7	1.7.022	0.924	940.74	1400.74	500.3	90.0	0.973	1.04	1.000	-0.040	1.042	0.051	3.52	
19	8	1.6.687	0.924	940.07	1116.07	1452.0	500.1	254.1	0.970	1.04	1.000	-0.043	1.040	0.055	2.40
21	9	1.6.353	0.925	942.20	1412.20	501.5	90.3	0.936	1.01	1.001	-0.022	1.010	0.044	2.27	
23	10	1.6.028	0.925	942.24	1457.3	502.4	90.3	0.927	1.00	1.001	-0.003	1.001	0.020	2.59	
25	11	1.5.679	0.924	940.66	1466.62	504.5	90.2	0.922	1.00	1.001	0.006	0.997	0.047	2.71	
27	12	1.5.345	0.926	942.57	1474.57	508.3	90.3	0.912	0.99	1.001	0.027	0.986	0.051	2.94	
29	13	1.5.014	0.925	942.37	1414.6	503.6	90.3	0.901	0.98	1.001	0.046	0.976	0.054	3.16	
31	14	1.4.689	0.926	943.17	1434.3	512.1	90.3	0.889	0.97	1.001	0.070	0.964	0.060	3.55	
33	15	1.4.354	0.925	942.43	1414.9	511.7	90.5	0.877	0.95	1.000	0.031	0.952	0.065	3.92	
35	16	1.4.027	0.927	942.45	1412.30	511.1	90.3	0.860	0.94	1.000	0.122	0.936	0.071	4.33	
37	17	1.3.674	0.925	941.40	1410.4	510.6	90.4	0.838	0.92	1.000	0.162	0.915	0.081	5.07	
39	18	1.3.350	0.925	942.00	1480.7	510.1	90.4	0.823	0.90	1.001	0.191	0.699	0.094	6.83	
41	19	1.3.020	0.925	942.24	1414.6	509.8	90.5	0.811	0.89	1.000	0.213	0.885	0.107	6.97	
43	20	1.2.686	0.925	941.94	1414.1	509.2	90.4	0.809	0.89	1.000	0.218	0.879	0.122	6.04	
45	21	1.2.352	0.925	941.96	1477.4	509.0	90.3	0.828	0.91	1.000	0.180	0.898	0.109	7.87	
47	22	1.2.024	0.925	941.84	1476.9	508.7	90.4	0.846	0.93	0.999	0.142	0.917	0.091	6.75	
49	23	1.1.693	0.925	942.12	1476.0	508.5	90.4	0.868	0.95	1.000	0.105	0.937	0.077	6.73	
51	24	1.1.365	0.925	942.28	1475.0	508.4	90.2	0.871	0.95	0.996	0.095	0.941	0.060	6.81	
53	25	1.1.013	0.925	942.30	1414.2	508.0	90.4	0.887	0.96	1.000	0.070	0.957	0.049	2.96	

TEST PART NO. 6 ALT 44 6146 25.073 PCT 4.00 2.11 4.00 SURVEY 4-14-77 DATE AEDC PROPULSION WIND TUNNEL TRANSONIC 16T

INTER FLOWFIELD SURVEY SUMMARY

POINT GP	X	Y	Z	PT	0	TT	ML	VNL/VN	PTL/VN	CPL	UL/VN	UL/VM	UL/VH	AAL	SM
5 1	14.011	0.924	941.046	1479.8	509.3	90.7	0.649	0.947	0.996	0.059	0.956	-0.036	0.005	0.30	-2.16
7 2	14.055	0.924	941.026	1479.8	509.4	90.4	0.649	0.946	0.996	0.059	0.956	-0.037	0.009	0.54	-2.23
9 3	14.048	0.924	942.026	1479.8	509.4	90.1	0.649	0.946	0.996	0.071	0.960	-0.037	0.009	0.14	-2.22
11 4	14.002	0.925	942.032	1486.7	510.3	91.1	0.649	0.947	0.996	0.053	0.969	-0.037	0.009	0.64	-2.22
13 5	14.076	0.924	941.056	1480.2	509.5	91.0	0.649	0.946	0.996	0.053	0.953	-0.038	0.021	1.26	-2.22
15 6	17.350	0.924	971.044	1480.0	509.5	91.0	0.925	1.60	0.947	-0.006	0.996	-0.040	0.031	1.69	-2.17
17 7	17.012	0.924	941.044	1479.6	509.6	91.0	0.936	1.01	0.996	-0.026	1.010	-0.035	0.025	1.43	-2.00
19 8	16.055	0.924	942.019	1460.1	509.7	91.0	0.74	1.13	0.997	-0.271	1.133	-0.033	0.007	0.35	-1.65
21 9	16.348	0.924	942.006	1479.3	509.4	90.9	1.125	1.16	0.997	-0.354	1.176	-0.037	0.001	0.04	-1.82
23 10	16.621	0.924	932.08	1479.3	509.5	91.0	1.114	1.17	0.998	-0.339	1.167	-0.044	-0.006	-0.32	-2.16
25 11	15.687	0.924	942.031	1480.0	509.6	91.0	1.110	1.16	0.998	-0.331	1.162	-0.048	-0.013	-0.63	-2.37
27 12	15.335	0.925	932.064	1480.4	509.9	91.2	1.103	1.16	0.999	-0.314	1.156	-0.052	-0.021	-1.05	-2.59
29 13	15.026	0.925	942.049	1479.9	509.9	90.4	1.095	1.15	0.999	-0.303	1.149	-0.055	-0.028	-1.40	-2.74
31 14	14.682	0.924	941.053	1479.4	509.2	90.7	1.089	1.15	0.999	-0.297	1.145	-0.061	-0.034	-1.70	-3.03
33 15	14.356	0.924	941.056	1480.3	509.9	90.9	1.084	1.15	0.999	-0.295	1.143	-0.066	-0.041	-2.05	-3.12
35 16	14.002	0.924	942.036	1479.9	509.6	91.2	1.078	1.14	0.998	-0.277	1.133	-0.073	-0.052	-2.60	-3.67
37 17	13.645	0.925	942.025	1479.7	509.7	91.0	1.070	1.13	0.996	-0.265	1.125	-0.083	-0.063	-3.21	-4.22
39 18	13.344	0.924	942.011	1479.6	509.6	91.0	1.083	1.14	0.995	-0.291	1.134	-0.099	-0.069	-4.45	-5.00
41 19	13.022	0.924	941.046	1480.0	509.4	91.0	1.118	1.17	0.998	-0.346	1.159	-0.099	-0.136	-6.69	-6.88
43 20	12.676	0.924	941.027	1478.1	503.5	90.8	1.067	1.13	0.999	-0.259	1.114	-0.072	-0.166	-8.50	-3.68
45 21	12.359	0.924	941.067	1478.5	508.4	91.0	0.954	1.06	0.949	-0.120	1.045	-0.036	-0.170	-9.26	-1.99
47 22	12.026	0.924	932.000	1479.6	509.3	91.1	0.932	1.01	1.000	-0.015	0.995	-0.095	-0.158	-9.01	-0.26
49 23	11.685	0.924	941.098	1481.6	510.1	91.0	0.918	0.99	1.000	0.011	0.984	0.012	-0.142	-8.23	0.67
51 24	11.352	0.924	932.007	1483.0	510.5	91.2	0.913	0.99	1.000	0.021	0.981	0.014	-0.130	-7.54	-0.83
53 25	10.998	0.925	942.041	1484.6	511.3	91.1	0.914	0.99	1.000	0.021	0.982	0.016	-0.121	-7.03	0.96

-35-

TEST PAINT MEXICO ALFAH WING Y 2 RUN SURVEY  
 TF-655 62 3.007 0.074 PCT -0.00 0.00 212  
 4-13-77 AEDC PROPULSION WIND TUNNEL  
 TRANSonic 16T

TUNNEL FLOWFIELD SURVEY SUMMARY

POINT GP	X	Y	Z	PT	TT	VL	VML/VW	VTL/VW	CPI	UL/VW	VL/VW	AAL	SML
1 0	10.495	0.426	992.10	1517.5	523.4	100.6	0.908	0.98	1.000	0.034	0.943	-0.19	-0.15
2 0	12.351	0.425	991.22	1514.5	522.0	100.2	0.909	0.98	1.000	0.050	0.975	-0.012	-0.017
3 0	13.685	0.425	990.64	1514.0	521.5	100.3	0.914	0.98	1.000	0.021	0.940	0.007	-0.021
4 0	14.982	0.425	990.70	1517.3	522.8	99.9	0.938	1.01	1.000	-0.025	1.012	-0.022	-0.012
5 0	16.312	0.925	990.68	1512.2	520.8	100.4	0.993	1.06	1.000	-0.125	1.062	0.025	0.012
6 0	17.323	0.924	990.10	1514.7	521.6	99.9	0.977	1.05	1.001	-0.094	1.047	-0.020	-0.022
7 0	19.005	0.426	992.04	1516.5	523.2	100.2	0.900	0.98	1.001	0.049	0.976	0.014	0.001

AEUC PROPULSION WIND TUNNEL  
TRANSOMIC 16T

DATE  
4-13-77

TEST PART MACHINERY ALUMINUM VITRUM Y1  
TF-635 46 2.093 -20.00 4 PCT -0.002 -14.1A 5 401  
MIDEN FLIGHTFIELD SURVEY SUMMARY

POINT NO.	AI	M	VIT	WT	U	V	W	VL/VM	P1L/PMT	CPL	UT/VM	VI/VM	ATL	SMTL
4	26.034	0.926	978.60	1471.5	516.7	87.0	0.915	0.99	1.000	0.017	0.991	0.005	0.28	0.33
5	23.533	0.926	974.97	1474.97	516.1	508.2	0.916	0.99	1.001	0.014	0.993	0.007	0.27	0.38
6	23.036	0.924	979.79	1479.79	512.6	510.2	0.921	1.00	1.002	0.007	0.998	0.005	0.29	0.41
7	23.036	0.924	971.49	1471.49	510.7	508.4	0.910	0.99	0.999	0.025	0.987	0.006	0.30	0.36
8	22.534	0.924	961.34	1471.34	511.3	511.7	0.919	1.00	1.001	0.010	0.995	0.006	0.31	0.37
9	22.041	0.924	961.35	1471.35	511.9	510.9	0.922	1.00	1.001	0.010	0.996	0.007	0.29	0.38
10	21.046	0.925	982.50	1477.9	509.1	61.0	0.917	0.99	1.000	0.014	0.993	0.007	0.28	0.38
11	21.046	0.925	982.50	1477.9	509.1	61.0	0.915	0.99	1.000	0.015	0.992	0.006	0.28	0.36
12	20.542	0.924	941.49	1472.49	506.7	506.3	0.916	0.99	1.001	0.014	0.994	0.005	0.20	0.35
13	20.047	0.925	941.72	1470.1	507.0	506.6	0.920	1.00	1.000	0.010	0.996	0.006	0.29	0.37
14	19.545	0.925	941.74	1470.7	507.4	506.6	0.920	1.00	1.000	0.010	0.997	0.007	0.28	0.40
15	19.045	0.924	941.57	1472.1	505.3	504.9	0.920	1.00	1.001	0.009	0.996	0.005	0.28	0.36
16	18.539	0.925	942.50	1475.4	505.5	504.5	0.914	0.99	1.000	0.011	0.994	0.006	0.26	0.36
17	18.039	0.925	942.49	1477.2	509.1	90.4	0.921	1.00	1.001	0.009	0.996	0.005	0.28	0.36
18	17.545	0.926	942.72	1470.4	504.7	90.1	0.922	1.00	1.000	0.008	0.996	0.005	0.28	0.36
19	17.034	0.926	942.48	1476.9	509.2	90.2	0.923	1.00	1.001	0.006	0.998	0.006	0.22	0.35
20	16.534	0.925	942.25	1472.5	508.7	90.3	0.922	1.00	1.000	0.007	0.997	0.006	0.29	0.35
21	16.043	0.925	941.63	1475.0	508.2	90.2	0.922	1.00	1.000	0.006	0.997	0.007	0.21	0.36
22	15.540	0.925	942.21	1473.4	507.4	90.4	0.923	1.00	1.000	0.006	0.994	0.003	0.18	0.35
23	15.037	0.925	941.46	1473.0	507.4	90.4	0.923	1.00	1.000	0.007	0.997	0.006	0.16	0.35
24	14.534	0.925	941.69	1473.3	507.5	90.3	0.923	1.00	1.000	0.005	0.998	0.003	0.16	0.34
25	14.045	0.925	942.25	1475.0	508.7	90.3	0.923	1.00	1.000	0.005	0.996	0.006	0.29	0.35
26	13.535	0.925	942.39	1475.4	508.5	90.4	0.921	1.00	1.000	0.006	0.997	0.005	0.21	0.36
27	13.041	0.924	941.53	1473.0	507.3	90.2	0.921	1.00	1.000	0.007	0.997	0.006	0.10	0.37
28	12.534	0.925	942.21	1473.1	507.4	90.2	0.920	1.00	1.000	0.008	0.996	0.002	0.10	0.36
29	12.041	0.925	941.76	1473.0	507.4	90.1	0.921	1.00	1.000	0.008	0.996	0.003	0.16	0.35
30	11.534	0.925	941.69	1473.3	507.5	90.1	0.923	1.00	1.000	0.009	0.999	0.005	0.16	0.34
31	11.034	0.925	941.60	1473.1	507.4	90.0	0.923	1.00	1.000	0.009	0.999	0.006	0.16	0.34
32	10.536	0.925	941.60	1473.3	507.5	90.2	0.921	1.00	1.000	0.009	0.997	0.006	0.12	0.34
33	10.041	0.924	941.53	1473.0	507.3	90.2	0.921	1.00	1.000	0.007	0.997	0.006	0.10	0.37
34	9.534	0.925	941.76	1474.9	507.4	90.2	0.920	1.00	1.000	0.008	0.997	0.006	0.09	0.36
35	9.041	0.925	941.95	1473.2	507.6	90.1	0.921	1.00	1.000	0.008	0.996	0.005	0.09	0.34
36	8.534	0.925	941.60	1473.4	507.5	90.1	0.920	1.00	1.000	0.009	0.999	0.007	0.09	0.33
37	8.041	0.925	941.45	1473.4	507.5	90.3	0.921	1.00	1.000	0.008	0.996	0.006	0.09	0.35
38	7.534	0.925	941.82	1474.0	507.4	90.2	0.924	1.00	1.000	0.004	0.999	0.006	0.05	0.35
39	7.041	0.925	942.21	1474.9	507.3	90.3	0.921	1.00	1.000	0.007	0.997	0.006	0.04	0.36
40	6.534	0.925	942.07	1473.0	507.6	90.1	0.920	1.00	1.000	0.009	0.996	0.005	0.06	0.36
41	6.041	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.009	0.991	0.007	0.07	0.36
42	5.534	0.925	942.04	1473.0	507.6	90.1	0.921	1.00	1.000	0.008	0.996	0.006	0.06	0.35
43	5.041	0.925	942.04	1473.0	507.6	90.1	0.920	1.00	1.000	0.010	0.995	0.007	0.04	0.33
44	4.541	0.925	942.04	1473.0	507.6	90.1	0.921	1.00	1.000	0.010	0.995	0.006	0.06	0.37
45	4.041	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.010	0.991	0.007	0.07	0.35
46	3.541	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.010	0.991	0.007	0.07	0.35
47	3.041	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.010	0.991	0.007	0.07	0.35
48	2.541	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.010	0.991	0.007	0.07	0.35
49	2.041	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.010	0.991	0.007	0.07	0.35
50	1.541	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.010	0.991	0.007	0.07	0.35
51	1.041	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.010	0.991	0.007	0.07	0.35
52	0.541	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.010	0.991	0.007	0.07	0.35
53	0.041	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.010	0.991	0.007	0.07	0.35
54	21.534	0.925	941.60	1473.4	507.5	90.4	0.920	1.00	1.000	0.001	0.999	0.007	0.19	0.34
55	21.041	0.925	941.45	1473.4	507.5	90.3	0.921	1.00	1.000	0.008	0.996	0.006	0.09	0.33
56	20.534	0.925	941.82	1474.0	507.4	90.2	0.924	1.00	1.000	0.004	0.999	0.006	0.05	0.35
57	20.041	0.925	942.21	1474.9	507.3	90.3	0.921	1.00	1.000	0.007	0.997	0.006	0.04	0.36
58	19.534	0.925	942.07	1473.0	507.6	90.1	0.920	1.00	1.000	0.009	0.996	0.002	0.04	0.37
59	19.041	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.009	0.996	0.001	0.04	0.37
60	18.534	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.009	0.996	0.001	0.04	0.37
61	18.041	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.009	0.996	0.001	0.04	0.37
62	17.534	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.009	0.996	0.001	0.04	0.37
63	17.041	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.009	0.996	0.001	0.04	0.37
64	16.534	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.009	0.996	0.001	0.04	0.37
65	16.041	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.009	0.996	0.001	0.04	0.37
66	15.534	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.009	0.996	0.001	0.04	0.37
67	15.041	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.009	0.996	0.001	0.04	0.37
68	14.534	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.009	0.996	0.001	0.04	0.37
69	14.041	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.009	0.996	0.001	0.04	0.37
70	13.534	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.009	0.996	0.001	0.04	0.37
71	13.041	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.009	0.996	0.001	0.04	0.37
72	12.534	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.009	0.996	0.001	0.04	0.37
73	12.041	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.009	0.996	0.001	0.04	0.37
74	11.534	0.925	942.07	1473.0	507.6	90.1	0.921	1.00	1.000	0.009	0.996	0.001	0.04	0.37
75	11.041	0.925	942.07	1473.0	507.6	90.1	0.921	1.00						



TEST N <sup>o</sup>	POINT GP	X <sup>1</sup>	Y <sup>1</sup>	Z <sup>1</sup>	RUN <sup>1</sup>		RUN <sup>2</sup>		SURVEY		DATE 4-13-71	AEUC PROPELLISION WIND TUNNEL TRANSONIC JET	
					V <sub>W</sub>	P <sub>T</sub>	V <sub>W</sub>	P <sub>T</sub>	V <sub>W</sub>	P <sub>T</sub>			
TF-435	37	23.456	0.426	47.867	516.5	0.923	478.5	516.5	490.7	0.923	1.00	0.007	-0.43 -0.69
	38	23.457	0.427	47.867	517.7	0.925	491.6	477.7	504.8	0.921	1.00	0.010	-0.05 -0.71
	39	23.458	0.428	47.867	518.0	0.926	491.0	478.0	504.2	0.919	1.00	0.012	-0.04 -0.68
	40	22.524	0.425	47.854	518.3	0.925	491.3	478.3	504.5	0.921	1.00	0.009	-0.03 -0.74
	41	21.574	0.425	47.854	518.6	0.925	491.6	478.6	504.8	0.921	1.00	0.009	-0.03 -0.72
	42	21.445	0.425	47.854	518.9	0.925	491.9	478.9	505.0	0.921	1.00	0.009	-0.04 -0.70
	43	21.047	0.426	47.855	519.2	0.926	492.2	479.2	505.3	0.924	1.00	0.009	-0.04 -0.71
	44	20.537	0.426	47.855	519.5	0.926	492.5	479.5	505.6	0.924	1.00	0.008	-0.04 -0.71
	45	20.047	0.426	47.855	519.8	0.926	492.8	479.8	505.9	0.924	1.00	0.008	-0.04 -0.70
	46	19.553	0.426	47.856	520.1	0.926	493.1	480.1	506.0	0.924	1.00	0.008	-0.03 -0.70
	47	19.040	0.426	47.856	520.4	0.926	493.4	480.4	506.3	0.924	1.00	0.005	-0.03 -0.67
	48	18.442	0.426	47.856	520.7	0.926	493.7	480.7	506.6	0.924	1.00	0.004	-0.03 -0.67
	49	18.017	0.426	47.856	521.0	0.926	494.0	481.0	506.9	0.924	1.00	0.004	-0.03 -0.70
	50	17.458	0.426	47.856	521.3	0.926	494.3	481.3	507.2	0.924	1.00	0.001	-0.03 -0.77
	51	16.904	0.426	47.856	521.6	0.926	494.6	481.6	507.5	0.924	1.00	0.001	-0.03 -0.70
	52	16.445	0.426	47.856	521.9	0.926	494.9	481.9	507.8	0.924	1.00	0.001	-0.03 -0.70
	53	16.042	0.426	47.856	522.2	0.926	495.2	482.2	508.1	0.924	1.00	0.001	-0.03 -0.70
	54	15.542	0.426	47.856	522.5	0.926	495.5	482.5	508.4	0.924	1.00	0.001	-0.03 -0.71
	55	15.042	0.427	47.856	522.8	0.926	495.8	482.8	508.7	0.924	1.00	0.001	-0.03 -0.71
	56	14.542	0.427	47.856	523.1	0.926	496.1	483.1	509.0	0.924	1.00	0.001	-0.03 -0.78
	57	14.042	0.427	47.856	523.4	0.926	496.4	483.4	509.3	0.924	1.00	0.001	-0.03 -0.76
	58	13.542	0.427	47.856	523.7	0.926	496.7	483.7	509.6	0.924	1.00	0.001	-0.03 -0.76
	59	13.042	0.427	47.856	524.0	0.926	497.0	484.0	509.9	0.924	1.00	0.001	-0.03 -0.76
	60	12.542	0.427	47.856	524.3	0.926	497.3	484.3	510.2	0.924	1.00	0.001	-0.03 -0.76
	61	12.042	0.427	47.856	524.6	0.926	497.6	484.6	510.5	0.924	1.00	0.001	-0.03 -0.76
	62	11.542	0.427	47.856	524.9	0.926	497.9	484.9	510.8	0.924	1.00	0.001	-0.03 -0.76
	63	11.042	0.427	47.856	525.2	0.926	498.2	485.2	511.1	0.924	1.00	0.001	-0.03 -0.76
	64	10.542	0.427	47.856	525.5	0.926	498.5	485.5	511.4	0.924	1.00	0.001	-0.03 -0.76
	65	10.042	0.427	47.856	525.8	0.926	498.8	485.8	511.7	0.924	1.00	0.001	-0.03 -0.76
	66	9.542	0.427	47.856	526.1	0.926	499.1	486.1	512.0	0.924	1.00	0.001	-0.03 -0.76
	67	9.042	0.427	47.856	526.4	0.926	499.4	486.4	512.3	0.924	1.00	0.001	-0.03 -0.76
	68	8.542	0.427	47.856	526.7	0.926	499.7	486.7	512.6	0.924	1.00	0.001	-0.03 -0.76
	69	8.042	0.427	47.856	527.0	0.926	500.0	487.0	512.9	0.924	1.00	0.001	-0.03 -0.76
	70	7.542	0.427	47.856	527.3	0.926	500.3	487.3	513.2	0.924	1.00	0.001	-0.03 -0.76
	71	7.042	0.427	47.856	527.6	0.926	500.6	487.6	513.5	0.924	1.00	0.001	-0.03 -0.76
	72	6.542	0.427	47.856	527.9	0.926	500.9	487.9	513.8	0.924	1.00	0.001	-0.03 -0.76
	73	6.042	0.427	47.856	528.2	0.926	501.2	488.2	514.1	0.924	1.00	0.001	-0.03 -0.76
	74	5.542	0.427	47.856	528.5	0.926	501.5	488.5	514.4	0.924	1.00	0.001	-0.03 -0.76
	75	5.042	0.427	47.856	528.8	0.926	501.8	488.8	514.7	0.924	1.00	0.001	-0.03 -0.76
	76	4.542	0.427	47.856	529.1	0.926	502.1	489.1	515.0	0.924	1.00	0.001	-0.03 -0.76
	77	4.042	0.427	47.856	529.4	0.926	502.4	489.4	515.3	0.924	1.00	0.001	-0.03 -0.76
	78	3.542	0.427	47.856	529.7	0.926	502.7	489.7	515.6	0.924	1.00	0.001	-0.03 -0.76
	79	3.042	0.427	47.856	530.0	0.926	503.0	489.0	515.9	0.924	1.00	0.001	-0.03 -0.76
	80	2.542	0.427	47.856	530.3	0.926	503.3	489.3	516.2	0.924	1.00	0.001	-0.03 -0.76
	81	2.042	0.427	47.856	530.6	0.926	503.6	489.6	516.5	0.924	1.00	0.001	-0.03 -0.76
	82	1.542	0.427	47.856	530.9	0.926	503.9	489.9	516.8	0.924	1.00	0.001	-0.03 -0.76
	83	1.042	0.427	47.856	531.2	0.926	504.2	490.2	517.1	0.924	1.00	0.001	-0.03 -0.76
	84	0.542	0.427	47.856	531.5	0.926	504.5	490.5	517.4	0.924	1.00	0.001	-0.03 -0.76
	85	0.042	0.427	47.856	531.8	0.926	504.8	490.8	517.7	0.924	1.00	0.001	-0.03 -0.76
	86	-0.542	0.427	47.856	532.1	0.926	505.1	491.1	518.0	0.924	1.00	0.001	-0.03 -0.76
	87	-1.042	0.427	47.856	532.4	0.926	505.4	491.4	518.3	0.924	1.00	0.001	-0.03 -0.76
	88	-1.542	0.427	47.856	532.7	0.926	505.7	491.7	518.6	0.924	1.00	0.001	-0.03 -0.76
	89	-2.042	0.427	47.856	533.0	0.926	506.0	492.0	518.9	0.924	1.00	0.001	-0.03 -0.76
	90	-2.542	0.427	47.856	533.3	0.926	506.3	492.3	519.2	0.924	1.00	0.001	-0.03 -0.76
	91	-3.042	0.427	47.856	533.6	0.926	506.6	492.6	519.5	0.924	1.00	0.001	-0.03 -0.76
	92	-3.542	0.427	47.856	533.9	0.926	506.9	492.9	519.8	0.924	1.00	0.001	-0.03 -0.76
	93	-4.042	0.427	47.856	534.2	0.926	507.2	493.2	520.1	0.924	1.00	0.001	-0.03 -0.76
	94	-4.542	0.427	47.856	534.5	0.926	507.5	493.5	520.4	0.924	1.00	0.001	-0.03 -0.76
	95	-5.042	0.427	47.856	534.8	0.926	507.8	493.8	520.7	0.924	1.00	0.001	-0.03 -0.76
	96	-5.542	0.427	47.856	535.1	0.926	508.1	494.1	521.0	0.924	1.00	0.001	-0.03 -0.76
	97	-6.042	0.427	47.856	535.4	0.926	508.4	494.4	521.3	0.924	1.00	0.001	-0.03 -0.76
	98	-6.542	0.427	47.856	535.7	0.926	508.7	494.7	521.6	0.924	1.00	0.001	-0.03 -0.76
	99	-7.042	0.427	47.856	536.0	0.926	509.0	495.0	521.9	0.924	1.00	0.001	-0.03 -0.76
	100	-7.542	0.427	47.856	536.3	0.926	509.3	495.3	522.2	0.924	1.00	0.001	-0.03 -0.76
	101	-8.042	0.427	47.856	536.6	0.926	509.6	495.6	522.5	0.924	1.00	0.001	-0.03 -0.76
	102	-8.542	0.427	47.856	536.9	0.926	509.9	495.9	522.8	0.924	1.00	0.001	-0.03 -0.76
	103	-9.042	0.427	47.856	537.2	0.926	510.2	496.2	523.1	0.924	1.00	0.001	-0.03 -0.76
	104	-9.542	0.427	47.856	537.5	0.926	510.5	496.5	523.4	0.924	1.00	0.001	-0.03 -0.76
	105	-10.042	0.427	47.856	537.8	0.926	510.8	496.8	523.7	0.924	1.00	0.001	-0.03 -0.76
	106	-10.542	0.427	47.856	538.1	0.926	511.1	497.1	524.0	0.924	1.00	0.001	-0.03 -0.76
	107	-11.042	0.427	47.856	538.4	0.926	511.4	497.4	524.3	0.924	1.00	0.001	-0.03 -0.76
	108	-11.542	0.427	47.856	538.7	0.926	511.7	497.7	524.6	0.924	1.00	0.001	-0.03 -0.76
	109	-12.042	0.427	47.856	539.0	0.926	512.0	498.0	524.9	0.924	1.00	0.001	-0.03 -0.76
	110	-12.542	0.427	47.856	539.3	0.926	512.3	498.3	525.2	0.924	1.00	0.001	-0.03 -0.76
	111	-13.042	0.427	47.856	539.6	0.926	512.6	498.6	525.5	0.924	1.00	0.001	-0.03 -0.76
	112	-13.542	0.427	47.856	539.9	0.926	512.9						

TEST PART N-4110-0 ALFRED SING VT DATE AFDC PROPULSION WIND TUNNEL  
TF-445 SK 3.003 -0.010 4 PCI 14.16 403 TRANSonic 167

4-13-77  
WILSON RIVER ITLD SURVEY SUMMARY

POINT #	A1	A2	Vin	V1	V1L	V1L/VM	P1L/P1T	CPI	UT/UTL	VI/VM	W1/WM	AATL	SWTL
1	60	7.050	0.924	940.09	1516.0	521.3	100.0	0.922	1.00	0.005	0.99	-0.10	1.01
2	60	4.663	0.923	940.07	1516.0	521.4	100.1	0.921	1.00	0.006	0.997	-0.12	1.01
3	60	7.043	0.924	940.77	1516.1	521.2	99.9	0.922	1.00	0.004	0.998	-0.05	1.02
4	60	7.044	0.924	940.46	1516.3	521.3	100.1	0.922	1.00	0.003	0.998	-0.01	1.01
5	60	6.976	0.924	940.19	1516.7	521.5	100.1	0.923	1.00	0.002	0.998	-0.08	1.01
6	60	6.944	0.924	940.67	1516.3	521.3	100.0	0.923	1.00	0.004	0.998	-0.09	1.06
7	60	5.378	0.924	940.98	1516.7	521.3	100.3	0.919	1.00	0.993	0.008	-0.13	1.06
8	60	5.077	0.926	941.53	1511.3	521.1	100.3	0.921	1.00	0.008	0.996	-0.17	1.07
9	60	3.520	0.925	940.86	1513.3	521.4	100.3	0.921	1.00	0.009	0.996	-0.03	1.07
10	60	3.021	0.925	941.99	1511.4	520.7	100.5	0.920	1.00	0.001	0.997	-0.15	1.10
11	60	5.001	0.925	941.96	1512.0	521.0	100.3	0.921	1.00	0.001	0.996	-0.04	1.09
12	60	4.473	0.925	941.06	1512.7	521.2	100.4	0.921	1.00	0.001	0.996	-0.09	1.12
13	60	3.830	0.925	941.07	1513.6	521.5	100.4	0.921	1.00	0.009	0.996	-0.07	1.08
14	60	3.520	0.925	940.86	1513.3	521.6	100.5	0.921	1.00	0.009	0.996	-0.020	1.13
15	60	3.021	0.925	941.64	1514.9	521.4	100.4	0.921	1.00	0.008	0.997	-0.001	1.10
16	60	2.962	0.926	941.93	1511.0	521.1	100.4	0.916	1.00	0.015	0.997	-0.01	1.12
17	60	2.547	0.925	941.23	1512.2	521.2	100.5	0.920	1.00	0.011	0.995	-0.019	1.08
18	60	2.060	0.925	940.69	1515.1	521.9	100.2	0.924	1.00	0.005	0.999	-0.019	1.10
19	60	1.704	0.925	941.19	1516.7	522.7	100.4	0.921	1.00	0.001	0.999	-0.014	1.02
20	60	1.035	0.925	941.39	1516.9	522.9	100.4	0.920	1.00	0.001	0.995	-0.019	1.07
21	60	0.415	0.926	941.64	1514.4	522.4	100.1	0.920	0.99	0.012	0.994	-0.019	1.07
22	60	-0.019	0.926	941.93	1512.7	521.0	100.3	0.918	0.99	0.016	0.992	-0.017	1.01
23	60	-0.529	0.926	941.59	1511.6	521.1	100.4	0.918	0.99	0.015	0.993	-0.018	1.03
24	60	-1.024	0.925	940.39	1512.7	520.9	99.9	0.914	0.99	0.014	0.990	-0.017	0.99
25	60	-1.262	0.925	941.43	1513.7	521.6	100.4	0.921	1.00	0.010	0.996	-0.017	0.98
26	60	-2.063	0.925	941.43	1513.9	521.8	100.5	0.919	0.99	1.001	0.012	-0.016	0.94
27	60	-2.652	0.925	941.08	1513.9	521.8	100.1	0.919	0.99	1.000	0.012	-0.017	0.96
28	60	-3.060	0.925	941.31	1514.7	522.0	100.4	0.920	1.00	1.001	0.010	-0.016	0.95
29	60	-3.041	0.925	941.15	1515.5	522.6	100.5	0.923	1.00	1.002	0.007	-0.016	0.92
30	60	-4.067	0.925	940.67	1514.6	521.7	100.4	0.918	0.99	1.001	0.014	-0.019	0.98
31	60	-4.490	0.926	941.85	1515.5	522.6	100.5	0.921	1.00	1.001	0.010	-0.017	0.92
32	60	-4.694	0.925	941.23	1513.0	521.5	100.3	0.923	1.00	1.004	0.011	-0.016	0.90
33	60	-4.985	0.925	941.62	1514.9	522.1	100.5	0.919	0.99	1.001	0.013	-0.014	0.83
34	60	-5.340	0.925	941.50	1515.2	522.3	100.4	0.920	1.00	1.001	0.011	-0.015	0.88

TEST	WIND TUBE NO.	WIND SPEED M/S	ANGLE OF ATTACK DEG	YI C.G. M	ZI C.G. M	RIN SURVEY	DATE	AEDC PROPULSION WIND TUNNEL TRANSonic 161
TP-665	72	3.000	5.05	4.50	0.3	-14.00	4-14-77	

DATE  
4-14-77

SUMMARY

TEST	PART	MATERIAL ALUMINUM			V1			V2			WIND SURVEY			UATE			AEUC PROPULSION WIND TUNNEL	
		1F-665	73	3.002	5.005	4.007	0.002	5.005	4.007	0.004	-14.0.4	5	401	MULTIPLANE	FLUID	SURVEY	SUMMARY	4-14-71
POINT	GP	A1	A2	V1H	V1M	V1L	0	17	W1L	W1M	W1L/P1	CYL	UT/VW	UT/VW	UT/VW	UT/VW	UT/VW	SWL
1	40	1.579	0.524	941.57	1481.57	1481.57	10.0	40.7	0.913	0.949	—	1.000	0.020	0.986	0.008	—	0.49	
3	47	1.044	0.492	942.5	1482.5	1482.5	10.0	91.0	0.913	0.949	—	1.000	0.023	0.984	0.004	0.004	0.25	
5	45	0.537	0.392	941.56	1481.56	1482.1	10.0	91.5	0.915	0.949	—	1.001	0.017	0.988	0.009	0.009	0.51	
7	49	0.021	0.223	940.48	1481.0	1481.0	90.9	90.9	0.913	0.949	—	0.990	0.014	0.987	0.010	0.002	0.31	
9	50	-0.454	0.925	942.5	1482.5	1481.6	510.4	90.4	0.915	0.949	—	0.990	0.018	0.986	0.009	0.002	0.53	
11	51	-0.463	0.492	942.40	1481.40	1481.3	510.3	91.0	0.915	0.949	—	0.991	0.019	0.987	0.008	0.003	0.49	
13	52	-1.474	0.925	942.75	1482.75	1481.2	510.4	90.6	0.914	0.949	—	0.991	0.020	0.986	0.009	0.003	0.50	
15	53	-1.465	0.492	942.4	1481.4	1481.3	510.1	90.7	0.914	0.949	—	0.990	0.019	0.986	0.009	0.003	0.51	
17	54	-2.469	0.925	942.5	1482.17	1481.2	510.2	90.6	0.915	0.949	—	0.990	0.017	0.987	0.009	0.004	0.51	
19	55	-2.973	0.925	941.48	1481.48	1481.2	510.2	90.5	0.916	0.949	—	0.990	0.015	0.988	0.009	0.003	0.51	
21	56	-3.470	0.492	942.77	1482.77	1481.8	510.7	90.9	0.915	0.949	—	0.990	0.019	0.986	0.012	0.005	0.67	
23	57	-3.472	0.925	942.75	1482.75	1481.5	510.4	90.7	0.914	0.949	—	0.990	0.011	0.988	0.009	0.006	0.54	
25	58	-4.472	0.925	942.74	1481.7	1481.7	510.6	90.6	0.917	0.949	—	0.990	0.015	0.988	0.010	0.004	0.58	
26	58	-4.922	0.925	942.66	1481.9	1481.9	510.6	90.4	0.918	0.949	—	0.990	0.013	0.989	0.009	0.004	0.52	
28	59	-6.926	0.925	942.77	1481.8	1481.7	90.9	90.9	0.922	1.000	—	0.992	0.012	0.992	0.009	0.008	0.62	

TEST PAHT MAXIMUM ALTIM. "LHS  
TP-445 TA 7.045 7.056 & PC1 0.911 -13.19 5 401  
WILTON FLOWFIELD SURVEY SUMMARY

DATE AEDC PROPULSION WIND TUNNEL  
4-14-77 TRANSONIC 167

POINT GP	AI	AL	V4	PT	ML	VT/VM	PIL/PT	CPL	UI/VM	VT/VM	WI/VM	AATL	SWTL
1 25	-0.6487	0.725	4H2.51	4H2.1	510.9	90.3	0.918	0.99	1.001	0.993	0.008	0.23	0.43
2 25	-0.609	0.720	4H2.73	4H2.65	510.7	90.2	0.917	0.99	1.001	0.997	0.008	0.24	0.47
3 25	-3.015	0.926	4H3.46	4H3.24	510.4	90.4	0.917	0.99	1.001	0.991	0.006	0.19	0.46
4 25	-1.946	0.926	4H3.24	4H3.24	509.9	90.1	0.917	0.99	1.001	0.991	0.003	0.15	0.47
5 25	-0.529	0.926	4H3.02	4H3.02	509.3	90.2	0.916	0.99	1.000	0.991	0.008	0.08	0.48
6 25	-0.660	0.926	4H3.22	4H3.3	509.0	90.3	0.916	0.99	1.000	0.991	0.001	0.01	0.48
7 25	0.957	0.927	4H3.72	4H3.72	508.8	90.4	0.917	0.99	1.000	0.991	0.000	0.03	0.45
8 25	2.019	0.926	4H3.03	4H3.05	507.7	90.5	0.915	0.99	1.000	0.991	0.000	0.02	0.45
9 25	3.068	0.927	4H3.75	4H3.75	507.6	90.4	0.917	0.99	1.001	0.991	0.008	0.03	0.44
10 25	4.007	0.927	4H3.95	4H3.95	507.1	90.2	0.918	0.99	1.000	0.991	0.007	0.05	0.39
11 25	4.955	0.924	4H0.96	4H0.95	504.7	90.1	0.915	0.99	1.000	0.991	0.011	0.02	0.63
12 25	6.105	0.925	4H1.09	4H0.99	504.5	90.3	0.917	0.99	1.000	0.993	0.008	0.04	0.45
13 25	7.040	0.925	4H1.68	4H1.68	504.3	90.3	0.915	0.99	1.000	0.992	0.008	0.02	0.44
14 25	8.032	0.925	4H1.47	4H1.47	503.5	90.0	0.915	0.99	1.000	0.991	0.008	0.04	0.45
15 25	8.661	0.924	4H1.62	4H1.62	503.6	90.4	0.916	0.99	1.001	0.993	0.008	0.09	0.45
16 25	10.062	0.924	4H1.36	4H2.1	503.3	90.3	0.915	0.99	1.000	0.992	0.008	0.09	0.47
17 25	10.946	0.924	4H1.22	4H2.0	503.3	90.1	0.914	0.99	1.000	0.990	0.015	0.12	0.42
18 25	12.030	0.924	4H1.17	4H0.94	503.8	90.4	0.917	0.99	1.001	0.994	0.008	0.31	0.47
19 25	13.969	0.925	4H0.47	4H0.67	503.9	90.1	0.915	0.99	1.001	0.992	0.009	0.04	0.50
20 25	14.981	0.923	4H0.62	4H0.62	504.8	90.3	0.916	0.99	1.001	0.993	0.011	0.05	0.50
21 25	14.966	0.924	4H0.43	4H0.3	505.1	90.4	0.921	1.00	1.003	0.997	0.004	0.05	0.48
22 25	15.959	0.925	4H1.40	4H1.4	506.5	90.3	0.917	0.99	1.001	0.993	0.008	0.31	0.44
23 25	16.951	0.925	4H1.65	4H1.3	506.8	90.0	0.919	0.99	1.001	0.994	0.009	0.39	0.50
24 25	17.944	0.925	4H2.08	4H1.33	507.6	90.4	0.919	0.99	1.001	0.992	0.006	0.36	0.47
25 25	19.052	0.925	4H1.48	4H1.48	507.1	90.2	0.918	0.99	1.001	0.993	0.007	0.39	0.43
26 25	19.962	0.925	4H2.31	4H2.31	507.2	90.4	0.918	0.99	1.000	0.993	0.008	0.39	0.47
27 25	21.073	0.925	4H2.14	4H2.02	507.3	90.3	0.915	0.99	1.000	0.990	0.002	0.07	0.40
28 25	22.001	0.925	4H2.12	4H2.0	507.2	90.4	0.917	0.99	1.000	0.993	0.008	0.42	0.48
29 25	22.977	0.925	4H2.23	4H1.3	507.1	90.1	0.921	1.00	1.001	0.996	0.012	0.39	0.68
30 25	24.047	0.925	4H2.42	4H1.5	507.2	90.4	0.920	1.00	1.001	0.995	0.008	0.36	0.47

TEST PART NUMBER ALFA 6166 V1  
T-445 H4 2-613 5-014 6-011 14-16 0-0  
DATE 4-14-77

AEDC PROPULSION WIND TUNNEL  
TRANSonic 1A1

WIND FLOWFIELD SURVEY SUMMARY

POINT #	X1	Y1	Z1	V1	V2	V3	V4	V5	V6	V7	ML	VTL/VM	PTL/PT	CMI.	UT/PT	UT/VM	#1/VM	#1/UT	SATL
1	25	-23.969	0.526	945.78	1377.0	511.2	90.7	0.935	1.01	1.003	-0.006	1.005	0.017	0.020	-0.020	1.17	-0.98		
2	25	22.042	0.426	945.07	1460.0	511.5	90.7	0.928	1.00	1.002	0.002	1.000	0.013	0.021	0.021	1.18	0.76		
3	25	21.171	0.428	945.36	1477.5	510.4	90.4	0.920	0.949	1.000	0.016	0.992	0.018	0.018	0.020	1.18	1.04		
4	25	20.341	0.426	945.40	1473.9	505.6	90.3	0.920	0.949	1.000	0.012	0.994	0.020	0.020	0.020	1.18	1.13		
5	25	19.656	0.426	945.21	1470.5	507.2	90.5	0.922	1.00	1.000	0.008	0.996	0.018	0.023	0.023	1.32	-0.01		
6	25	18.955	0.426	945.45	1467.0	505.8	90.5	0.920	0.949	1.000	0.011	0.995	0.014	0.020	0.020	1.15	0.79		
7	25	-18.048	0.426	943.13	1466.4	505.8	90.4	0.929	1.00	1.001	-0.005	1.003	-0.019	0.019	-0.019	1.10	-1.08		
8	25	16.940	0.426	943.18	1468.2	506.5	90.4	0.939	1.01	1.000	-0.022	1.011	-0.007	0.007	0.007	0.41	1.11		
9	25	16.045	0.426	943.45	1470.1	507.1	90.7	0.932	1.01	1.001	-0.009	1.005	-0.021	0.016	0.016	0.91	1.22		
10	25	14.890	0.425	942.42	1471.5	507.2	90.4	0.929	1.00	1.001	-0.006	1.003	-0.026	0.013	0.013	0.74	1.47		
11	25	13.645	0.425	942.04	1473.1	507.3	90.7	0.929	1.00	1.001	-0.006	1.004	-0.020	0.012	0.012	0.68	1.12		
12	25	13.002	0.424	941.33	1467.9	507.1	90.4	0.923	1.00	1.001	-0.004	0.999	-0.023	0.010	0.010	0.56	1.34		
13	25	11.916	0.424	941.52	1479.4	509.4	90.7	0.925	1.00	1.001	-0.001	1.000	-0.023	0.010	0.010	0.55	1.32		
14	25	10.678	0.423	940.69	1462.2	504.4	90.6	0.922	1.00	1.001	-0.005	0.998	-0.022	0.008	0.008	0.47	1.27		
15	25	9.693	0.423	940.96	1462.6	509.5	90.5	0.919	1.00	1.001	-0.009	0.997	-0.022	0.006	0.006	0.35	1.26		
17	25	8.978	0.424	941.71	1463.9	510.9	90.5	0.924	1.00	1.001	-0.003	0.993	-0.019	0.007	0.007	0.41	1.05		
18	25	8.062	0.424	941.67	1463.6	510.4	90.7	0.921	1.00	1.001	-0.007	0.997	-0.022	0.007	0.007	0.40	1.29		
19	25	6.866	0.424	941.92	1461.1	510.1	90.6	0.917	0.99	1.000	-0.014	0.993	-0.025	0.007	0.007	0.39	1.64		
20	25	6.211	0.425	942.44	1479.7	510.0	90.5	0.921	1.00	1.000	-0.009	0.995	-0.022	0.006	0.006	0.36	1.28		
21	25	4.656	0.425	942.43	1476.0	509.5	90.7	0.921	1.00	1.001	-0.009	0.995	-0.022	0.006	0.006	0.37	1.29		
22	25	3.945	0.425	942.66	1477.3	509.3	90.7	0.920	1.00	1.001	-0.010	0.995	-0.023	0.006	0.006	0.32	1.31		
23	25	2.865	0.425	942.51	1475.0	504.6	90.6	0.918	0.99	1.001	-0.015	0.993	-0.022	0.006	0.006	0.35	1.27		
24	25	1.934	0.424	941.46	1473.8	507.5	90.6	0.914	0.99	1.000	-0.019	0.990	-0.022	0.004	0.004	0.21	1.25		
25	25	1.025	0.425	942.19	1472.7	507.3	90.6	0.916	0.99	1.000	-0.018	0.991	-0.021	0.005	0.005	0.32	1.20		
26	25	-0.043	0.425	942.13	1471.7	506.9	90.6	0.917	0.99	1.000	-0.015	0.993	-0.018	0.006	0.006	0.33	1.02		
27	25	-1.129	0.424	941.08	1469.2	505.8	90.6	0.916	0.99	1.000	-0.016	0.992	-0.022	0.005	0.005	0.31	1.26		
28	25	-2.077	0.425	942.46	1464.5	506.1	90.5	0.910	0.99	0.995	-0.019	0.986	-0.020	-0.003	-0.003	1.13			
29	25	-2.672	0.424	941.96	1466.8	505.1	90.7	0.916	0.99	1.000	-0.017	0.992	-0.019	0.006	0.006	0.34	1.11		
30	25	-4.092	0.425	942.23	1467.1	505.4	90.7	0.918	0.99	1.001	-0.014	0.994	-0.018	0.006	0.006	0.32	1.06		
31	25	-4.940	0.424	941.66	1466.4	505.0	90.4	0.918	0.99	1.001	0.013	0.994	0.018	0.006	0.006	0.37	1.06		

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DATE 4-14-77

AEDC PROPULSION WIND TUNNEL

TRANSONIC 161

TEST PAHT #445 ALT 4000 FT WING -5.012 4 PCL -6.00 -14.14 5 501

WIND FIELD SURVEY SUMMARY

POINT GP	AI	M	V <sub>W</sub>	V <sub>T</sub>	V <sub>L</sub>	V <sub>T</sub> /V <sub>W</sub>	P <sub>T</sub> L/P <sub>T</sub>	CPL	U <sub>T</sub> /V <sub>W</sub>	U <sub>T</sub> /V <sub>M</sub>	WI/V <sub>M</sub>	AATL	SWTL
1	24.004	0.7426	9162.05	1482.07	511.1	0.920	0.99	1.000	0.995	0.010	0.021	1.22	0.57
2	1	23.022	0.426	9162.17	1482.04	511.3	0.923	1.00	0.997	0.010	0.021	1.20	0.55
3	1	21.943	0.525	9161.42	1482.07	511.1	0.924	1.00	0.998	0.009	0.021	1.22	0.53
4	1	21.024	0.426	9162.22	1482.09	511.3	0.926	1.00	0.998	0.010	0.022	1.25	0.55
5	1	20.052	0.425	9161.64	1482.05	511.0	0.929	1.00	1.000	0.006	0.022	1.24	0.51
6	1	19.029	0.425	9162.42	1482.09	511.4	0.930	1.01	1.001	-0.011	0.006	1.24	0.49
7	1	17.024	0.426	9162.95	1482.07	511.2	0.935	1.01	1.000	-0.016	1.008	1.22	0.61
8	1	17.031	0.426	9162.16	1483.5	511.4	0.940	1.01	1.000	-0.026	1.013	0.019	1.09
9	1	16.005	0.425	9161.75	1483.02	511.2	0.962	1.03	1.003	-0.061	1.033	0.016	0.99
10	1	14.964	0.426	9161.99	1484.0	511.7	0.938	1.01	0.999	-0.025	1.012	0.010	0.59
11	1	13.991	0.425	9161.78	1483.5	511.3	0.930	1.00	0.996	-0.014	1.004	0.009	0.43
12	1	12.970	0.426	9162.67	1484.0	511.0	0.936	1.01	1.001	-0.017	1.009	0.010	0.05
13	1	12.023	0.426	9162.51	1483.4	511.7	0.936	1.01	1.000	-0.017	1.009	0.007	0.29
14	1	11.011	0.426	9162.25	1482.6	511.3	0.931	1.01	1.001	-0.019	1.005	0.010	0.58
15	1	10.033	0.426	9161.47	1481.2	510.4	0.929	1.00	1.000	-0.006	1.003	0.010	0.56
16	1	9.030	0.426	9162.19	1481.5	510.9	0.929	1.00	1.001	-0.006	1.003	0.007	0.38
17	1	7.597	0.426	9161.49	1481.02	511.3	0.920	1.00	1.001	-0.003	1.002	0.010	0.05
18	1	7.031	0.426	9161.31	1481.02	509.4	0.927	1.00	1.000	-0.004	1.002	0.009	0.01
19	1	6.053	0.423	9162.3	1481.04	509.3	0.919	1.00	1.001	0.009	0.996	0.009	0.47
20	1	5.027	0.423	9160.46	1479.6	508.9	0.917	0.922	1.00	1.000	0.003	0.999	0.009
21	1	4.008	0.423	9161.15	1479.8	508.9	0.910	0.921	1.00	1.001	0.005	0.998	0.009
22	1	3.013	0.424	9161.70	1479.02	509.2	0.920	1.00	1.000	0.001	0.996	0.009	0.53
23	1	2.036	0.424	9161.64	1479.1	507.3	0.918	0.99	1.000	0.013	0.994	0.010	0.02
24	1	1.004	0.425	9162.40	1478.9	509.4	0.916	0.99	1.000	0.016	0.992	0.009	0.01
25	1	0.642	0.424	9162.02	1479.1	503.3	0.915	0.99	1.001	0.018	0.992	0.009	0.07
26	1	0.976	0.425	9162.19	1479.2	509.5	0.916	0.99	1.000	0.019	0.991	0.009	0.13
27	1	1.976	0.424	9161.61	1479.4	509.1	0.914	0.99	1.001	0.020	0.991	0.009	0.44
28	1	2.960	0.425	9162.38	1479.9	509.4	0.918	0.99	1.001	0.015	0.993	0.008	0.53
29	1	3.997	0.424	9161.77	1478.8	509.1	0.917	0.914	0.99	1.001	0.020	0.990	0.015
30	1	4.944	0.424	9162.04	1478.0	508.9	0.917	0.99	1.000	0.015	0.993	0.009	0.27
31	1	5.963	0.424	9161.99	1477.5	508.7	0.919	0.921	1.00	1.001	0.007	0.997	0.006

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TEST PART REFLUX-0 ALFRED WIND Y RUN SURVEY

TP-663 60 2.997 -0.010 + PCT 4.00 -1.02 4 20A

DATE AEDC PROPULSION WIND TUNNEL  
4-13-77 TRANSONIC 1&1

## INTER FLOWFIELD SURVEY SUMMARY

POINT GP X	Y	Z	V	PT	TT	ML	WL/VN	PTL/PT	CPL	UL/VN	WL/VM	AAL	SWL	
1 60	19.013	0.476	1037.05	14.855.6	537.4	100.6	0.914	0.95	0.997	0.102	0.946	0.010	0.97	0.58
4 0	16.013	0.975	1036.65	14.661.1	537.9	100.4	0.911	0.94	0.995	0.013	0.944	0.009	0.91	0.55
5 0	18.663	0.978	1037.41	14H7.4	536.9	100.8	0.915	0.95	0.995	0.100	0.946	0.011	0.914	0.64
6 0	18.313	0.977	1038.05	1490.0	540.0	100.6	0.915	0.95	0.994	0.012	0.946	0.012	1.03	0.55
7 0	18.013	0.976	1037.63	1485.7	538.5	100.8	0.935	0.96	0.993	0.061	0.964	0.017	1.59	0.99
8 0	17.635	0.975	1036.09	1485.7	537.8	100.5	1.126	1.13	0.995	0.256	1.124	0.017	0.057	2.88
9 0	17.336	0.973	1035.37	1488.1	537.7	100.9	1.175	1.17	0.997	0.332	1.164	0.002	0.065	3.21
10 0	17.004	0.975	1036.10	1486.7	538.5	100.5	1.144	1.14	0.995	0.281	1.139	0.008	0.039	1.97
11 0	16.664	0.974	1035.66	1488.5	539.2	100.8	1.093	1.10	0.993	0.199	1.099	0.009	0.018	0.92
12 0	15.316	0.974	1035.26	1488.4	538.0	100.5	1.057	1.07	1.000	0.141	1.070	0.003	0.008	0.43
13 0	15.397	0.973	1034.56	1489.1	537.7	100.8	1.034	1.05	1.001	0.102	1.052	0.005	0.001	0.08
14 0	15.655	0.974	1035.76	1490.0	539.0	100.8	1.012	1.03	1.000	0.064	1.032	0.003	-0.006	-0.17
15 0	15.331	0.974	1035.59	1489.4	538.4	100.7	1.002	1.02	1.000	0.048	1.024	0.001	-0.008	-0.06
16 0	15.014	0.974	1036.21	1489.3	538.6	100.9	0.998	1.02	1.000	0.040	1.020	0.001	-0.015	-0.04
17 0	14.653	0.974	1035.51	1487.4	547.4	100.7	0.983	1.01	1.000	0.015	1.007	0.002	-0.022	-0.10
18 0	14.329	0.974	1035.32	1488.0	537.7	100.6	0.979	1.00	1.000	0.009	1.004	0.004	-0.025	-0.23
19 0	14.324	0.973	1035.16	1487.7	537.5	100.8	0.973	1.00	1.000	0.000	0.999	0.004	-0.026	-0.23
20 0	14.010	0.974	1035.32	1488.4	538.1	100.9	0.966	0.99	1.000	0.011	0.994	0.007	-0.031	-0.78
21 0	13.854	0.974	1035.14	1488.7	538.1	100.6	0.942	0.97	1.000	0.056	0.971	0.011	-0.036	-2.10
22 0	13.324	0.974	1035.99	1488.7	538.3	100.8	0.936	0.97	1.000	0.066	0.966	0.018	-0.039	-2.29
23 0	13.021	0.974	1035.75	1488.7	538.3	100.6	0.932	0.96	1.000	0.074	0.962	0.024	-0.038	-2.27
24 0	12.868	0.974	1035.48	1488.1	537.9	100.7	0.929	0.96	1.001	0.080	0.960	0.032	-0.031	-1.85
25 0	12.344	0.974	1035.73	1488.2	538.1	100.6	0.925	0.96	1.000	0.086	0.956	0.023	-0.023	-1.37
26 0	11.978	0.974	1035.36	1488.4	538.1	100.4	0.928	0.95	1.001	0.082	0.959	0.031	-0.015	-1.87
27 0	11.682	0.974	1035.59	1487.8	537.9	100.9	0.928	0.96	1.000	0.081	0.959	0.028	-0.010	-0.62
28 0	11.338	0.974	1035.66	1487.7	537.9	100.6	0.929	0.96	1.000	0.080	0.960	0.024	-0.007	-0.42
29 0	10.944	0.974	1035.20	1488.1	537.8	100.5	0.930	0.96	1.000	0.077	0.961	0.020	-0.005	-0.27

AEDC PROPULSION WIND TUNNEL  
TRANSONIC 16T

DATE 4-14-77 RUN SURVEY  
TIME 4:00 -0.41 4 204

INNER FLOWFIELD SURVEY SUMMARY

POINT	X	Y	Z	RUN	SURVEY	V <sub>L</sub>	PT	U	T <sub>L</sub>	ML	VM <sub>L</sub>	PTL/PT	CPL	UL/VM	VL/VM	WL/VM	AAL	SML
WALL	WALL	WALL	WALL	WALL	WALL	WALL	WALL	WALL	WALL	WALL	WALL	WALL	WALL	WALL	WALL	WALL	WALL	WALL
1	14.621	0.976	1027.91	1452.02	525.00	90.04	0.945	0.97	0.994	0.052	0.970	0.055	0.051	2.99	3.23			
2	14.630	0.976	1027.79	1453.04	526.03	90.05	0.943	1.01	1.000	-0.030	1.011	0.057	0.054	3.07	3.21			
3	14.632	0.976	1024.05	1454.04	526.04	90.07	1.010	1.03	0.998	-0.061	1.025	0.057	0.064	3.56	3.19			
4	14.626	0.976	1024.24	1455.9	527.02	90.09	1.067	1.08	0.998	-0.156	1.072	0.058	0.074	3.97	3.08			
5	17.627	0.977	1024.12	1455.7	527.05	90.08	1.079	1.09	0.998	-0.173	1.082	0.049	0.070	3.71	2.58			
6	17.365	0.974	1026.09	1454.0	525.06	90.06	1.066	1.08	0.999	-0.158	1.075	0.042	0.064	3.41	2.24			
7	17.028	0.975	1027.12	1455.1	526.04	90.09	1.055	1.07	1.000	-0.136	1.066	0.037	0.052	2.80	2.01			
8	16.694	0.975	1027.11	1454.7	526.03	90.07	1.026	1.04	1.000	-0.090	1.042	0.035	0.035	1.94	1.94			
9	16.345	0.975	1026.40	1454.1	526.01	90.05	0.992	1.01	1.000	-0.030	1.014	0.037	0.025	1.39	2.10			
10	16.022	0.975	1026.54	1454.4	526.01	90.04	0.939	0.97	1.001	0.062	0.964	0.040	0.021	1.25	2.35			
11	15.693	0.975	1027.12	1454.0	526.00	90.08	0.936	0.97	1.000	0.068	0.965	0.042	0.010	0.60	2.52			
12	15.346	0.975	1026.90	1453.6	525.06	90.07	0.927	0.96	1.000	0.043	0.958	0.046	0.005	0.28	2.76			
13	15.019	0.976	1026.53	1452.7	525.04	90.04	0.919	0.95	1.000	0.096	0.950	0.049	0.002	0.14	2.97			
14	14.694	0.975	1027.36	1453.2	525.04	90.09	0.912	0.94	1.000	0.111	0.943	0.054	-0.001	-0.06	3.31			
15	14.354	0.975	1027.61	1453.1	525.04	90.08	0.934	0.93	1.000	0.134	0.931	0.062	-0.005	-0.29	3.82			
16	14.025	0.975	1027.09	1452.9	525.05	90.05	0.949	0.92	1.000	0.151	0.922	0.067	-0.002	-0.13	4.16			
17	13.694	0.975	1027.37	1452.6	525.07	90.06	0.871	0.91	1.000	0.183	0.904	0.081	0.001	0.07	5.12			
18	13.354	0.975	1027.37	1452.1	525.05	90.07	0.853	0.89	1.000	0.216	0.886	0.092	0.009	0.59	5.95			
19	13.016	0.974	1026.71	1451.8	525.00	90.06	0.841	0.88	1.000	0.236	0.875	0.106	0.029	1.88	6.88			
20	12.689	0.974	1026.53	1451.1	524.07	90.06	0.840	0.88	1.000	0.236	0.871	0.117	0.059	3.88	7.67			
21	12.360	0.975	1026.92	1450.9	524.09	90.05	0.858	0.90	0.999	0.204	0.886	0.106	0.089	5.75	6.85			
22	12.026	0.975	1027.17	1451.2	525.00	90.08	0.880	0.92	1.000	0.167	0.906	0.086	0.102	6.41	5.45			
23	11.691	0.975	1027.33	1450.4	524.09	90.07	0.894	0.93	1.000	0.141	0.920	0.066	0.107	6.66	4.09			
24	11.373	0.974	1026.52	1449.0	524.03	90.05	0.903	0.94	0.999	0.124	0.929	0.056	0.107	6.57	3.47			
25	11.024	0.974	1026.95	1449.9	524.04	90.09	0.909	0.94	1.000	0.113	0.936	0.043	0.106	6.47	2.65			

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TEST PAINT MEXICO-0 ALFA M WIND DATE 4-14-77 AEDC PROPULSION WIND TUNNEL

TF=445 87 2.0992 -5.714 PCT 4.00 -1.09 7 4 SURVEY 20A

INNER FLOORFIELD SURVEY SUMMARY

POINT GP	A	H	V-A	PT	U	WL	VWL/VH	PWL/PT	CPL	UL/VW	VL/VH	WL/VH	HAL	SNC
5	1	1.6.015	0.975	1.026.49	1.452.4	525.5	89.9	0.929	0.96	0.491	0.067	0.958	-0.030	-1.43 -1.42
7	2	1.6.674	0.975	1.026.75	1.453.4	525.0	90.1	0.929	0.96	0.490	0.063	0.959	-0.028	-1.64 -1.64
9	3	1.6.364	0.975	1.026.34	1.456.4	526.2	90.0	0.936	0.97	0.493	0.040	0.966	-0.023	-1.56 -1.37
11	4	1.6.014	0.974	1.025.92	1.455.5	526.4	89.4	1.154	1.15	0.961	0.323	1.151	-0.010	-0.016
13	5	1.6.060	0.975	1.026.37	1.452.4	526.6	89.5	1.256	1.23	0.946	0.461	1.224	-0.014	-0.79 -0.49
15	6	1.7.361	0.975	1.026.62	1.455.5	526.8	89.7	1.246	1.22	0.968	0.445	1.217	-0.040	0.056
17	7	1.7.004	0.976	1.027.67	1.455.3	527.0	89.9	1.235	1.21	0.991	0.422	1.207	-0.044	0.031
19	8	1.6.647	0.976	1.027.74	1.453.7	526.6	90.0	1.219	1.20	0.993	0.397	1.195	-0.044	0.022
21	9	1.6.335	0.976	1.027.50	1.451.9	525.9	89.9	1.201	1.18	0.993	0.370	1.182	-0.043	0.017
23	10	1.6.640	0.976	1.027.04	1.450.5	525.2	89.8	1.193	1.16	0.994	0.358	1.176	-0.043	0.014
25	11	1.5.0085	0.976	1.026.98	1.449.3	524.4	89.7	1.183	1.17	0.995	0.343	1.169	-0.046	0.012
27	12	1.5.351	0.975	1.026.46	1.448.7	524.3	89.7	1.169	1.16	0.996	0.322	1.158	-0.047	0.015
29	13	1.5.014	0.975	1.026.45	1.450.1	524.9	89.9	1.155	1.15	0.996	0.300	1.147	-0.051	0.033
31	14	1.6.069	0.975	1.026.46	1.452.9	525.6	90.1	1.156	1.15	0.996	0.302	1.148	-0.053	0.038
33	15	1.6.347	0.974	1.026.20	1.454.8	526.1	90.1	1.153	1.15	0.997	0.297	1.145	-0.057	0.044
35	16	1.6.006	0.975	1.026.76	1.454.9	526.6	89.9	1.143	1.14	0.996	0.240	1.135	-0.062	0.053
37	17	1.3.661	0.975	1.026.31	1.453.6	526.1	89.6	1.131	1.13	0.986	0.276	1.126	-0.065	0.057
39	18	1.3.330	0.975	1.026.83	1.453.2	526.1	89.8	1.205	1.19	0.993	0.378	1.182	-0.069	0.054
41	19	1.3.015	0.976	1.027.14	1.452.6	525.9	90.0	1.194	1.18	0.996	0.356	1.166	-0.116	0.121
43	20	1.2.694	0.975	1.027.18	1.451.9	525.9	90.1	1.150	1.13	0.999	0.256	1.113	-0.060	0.165
45	21	1.2.345	0.975	1.026.15	1.450.4	525.2	89.9	1.032	1.05	0.999	0.098	1.035	-0.030	0.164
47	22	1.2.015	0.975	1.026.24	1.449.4	524.7	89.5	0.965	0.99	1.000	0.016	0.981	-0.003	0.146
49	23	1.1.664	0.975	1.026.77	1.450.0	524.9	89.7	0.939	0.97	1.000	0.064	0.959	-0.013	0.130
51	24	1.1.358	0.976	1.026.98	1.449.5	524.6	89.9	0.934	0.96	1.000	0.071	0.957	-0.019	0.119
53	25	1.1.016	0.975	1.026.75	1.448.9	524.4	90.0	0.932	0.96	1.000	0.075	0.956	-0.019	0.113

TEST PART HEILOU-6 ALFA M WINDS Y 7 MIN SURVEY

TF=445 61 2.043 2.011 4 PCT -4.000 -1.000 -4 212

DATE 4-13-77 AEUC PROPULSION WIND TUNNEL

TRANSOMIC 16T

INNER FLOWFIELD SURVEY, SUMMARY

POINT #P	A	N	V1	PT	G	TT	VL	VML/VH	PTL/PT	CPL	UL/VH	VL/VH	ML/VH	SWL
4 0	11.025	0.974	1.045.43	1.047.07	537.04	1.01.0	0.924	0.96	1.000	0.079	0.960	-0.003	-0.000	-0.01 -0.17
5 0	12.357	0.974	1.015.39	1.017.04	537.6	1.00.7	0.923	0.96	1.000	0.099	0.956	-0.015	-0.012	-0.69 -0.88
6 0	13.054	0.974	1.034.50	1.034.00	539.0	1.00.7	0.931	0.96	0.998	0.073	0.962	0.002	0.028	-1.69 0.12
7 0	15.027	0.973	1.035.28	1.035.00	539.4	1.00.9	0.974	1.00	1.000	0.004	0.018	-0.016	-0.93	1.03
8 0	16.321	0.974	1.036.11	1.042.0	539.6	1.00.7	1.046	1.06	0.999	-0.121	1.060	0.027	0.009	0.49 1.48
9 0	17.645	0.974	1.035.54	1.035.00	538.0	1.00.9	1.018	1.12	0.995	-0.246	1.119	0.019	0.041	2.12 0.98
10 0	19.014	0.974	1.035.98	1.046.5	537.6	1.00.7	0.925	0.96	0.995	0.077	0.957	0.011	-0.005	-0.29 0.63



TEST PART HEADING ALPHAS  $\alpha_{in}$  YI ZT MUN SURVEY  
 TP-005 47 2.037 0.017 0.02 -0.02 -14.17 5 401  
 TPIER PLUMPFELU SURVEY SUMMARY

POINT GP	AI	M	VN	P1	W	TT	ML	VTL/VN	PIL/P1	CPL	UT/VN	VI/VN	MI/VM	AATL	SWTL
5 49	0.047	0.976	0.977	0.977	0.977	1.453	0.9	526.4	90.4	1.943	0.97	1.001	0.057	0.972	0.005
7 50	-0.046	0.976	0.976	1.027	1.027	1.453	0.9	525.6	90.1	0.943	0.97	1.000	0.057	0.972	0.005
9 51	-0.045	0.976	0.976	1.027	1.027	1.453	0.9	526.2	90.1	0.944	0.97	1.000	0.056	0.972	0.005
11 52	-1.056	0.976	1.027	1.027	1.027	1.453	0.9	526.9	90.2	0.942	0.97	1.000	0.058	0.971	0.005
13 53	-1.566	0.976	1.027	1.027	1.027	1.453	0.9	526.1	90.4	0.943	0.97	1.001	0.057	0.972	0.006
15 54	-2.453	0.976	1.027	1.027	1.027	1.453	0.9	526.1	90.2	0.954	0.99	1.001	0.031	0.985	0.006
17 55	-2.956	0.975	1.027	1.027	1.027	1.452	0.9	525.6	90.2	0.944	0.97	1.000	0.055	0.972	0.004
19 56	-3.471	0.975	1.026	1.026	1.026	1.452	0.9	525.7	90.2	0.944	0.97	1.000	0.055	0.973	0.004
21 57	-3.962	0.975	1.026	1.026	1.026	1.452	0.9	525.9	90.3	0.962	0.99	1.001	0.023	0.989	0.004
23 58	-4.462	0.975	1.026	1.026	1.026	1.452	0.9	525.7	90.1	0.959	0.99	1.001	0.028	0.986	0.006
25 59	-4.964	0.975	1.026	1.026	1.026	1.452	0.9	525.5	90.2	0.961	0.99	1.000	0.026	0.987	0.006
27 60	-5.469	0.975	1.026	1.026	1.026	1.452	0.9	525.5	90.3	0.961	0.99	1.000	0.025	0.988	0.006
29 61	-5.768	0.975	1.026	1.026	1.026	1.452	0.9	525.6	90.4	0.961	0.99	1.000	0.025	0.988	0.004

TEST PART MEXICO-6 ALF6M "In" 16.16 -0.04 5 403  
Trans 56 3.000 -0.014 PCT 16.16 -0.04 5 403  
OUTLET PLATE SURVEY SUMMARY

POINT	GP	X1	Y1	V1	HT	U	T1	ML	VT/V1	P1/P1	CPL	UT/VM	WT/VM	ATL	SWL	DATE	
																AEOC PROPULSION WIND TUNNEL	TRANSonic 167
1	60	26.007	0.975	0.2610	1.526.9	526.2	89.4	0.963	0.99	T.001	0.022	0.989	0.011	0.003	0.778	0.63	
2	60	23.506	0.975	1.026.31	1.453.5	526.0	89.6	0.959	0.99	1.00	0.029	0.986	0.004	0.025	0.51		
3	60	23.006	0.975	1.026.31	1.453.3	525.9	89.4	0.961	0.99	1.001	0.026	0.987	0.011	0.005	0.27	0.62	
4	60	22.506	0.976	1.026.31	1.453.1	526.1	89.4	0.960	0.99	1.001	0.028	0.986	0.011	0.004	0.24	0.61	
5	60	22.003	0.976	1.026.31	1.453.0	526.0	89.6	0.958	0.99	1.001	0.031	0.985	0.011	0.004	0.26	0.61	
6	60	21.492	0.976	1.026.31	1.453.2	526.2	89.4	0.961	0.99	1.000	0.013	0.993	0.010	0.012	0.70	0.59	
7	60	20.978	0.976	1.026.21	1.453.7	526.6	89.5	0.959	0.99	1.001	0.031	0.985	0.010	0.005	0.27	0.58	
8	60	20.477	0.976	1.026.4	1.453.6	526.5	89.4	0.964	0.97	1.001	0.057	0.972	0.009	0.005	0.27	0.54	
9	60	20.016	0.976	1.026.63	1.453.0	526.1	89.5	0.946	0.97	1.000	0.056	0.972	0.004	0.005	0.27	0.51	
10	60	19.338	0.976	1.026.64	1.422.9	526.1	89.4	0.961	0.99	1.000	0.028	0.967	0.008	0.005	0.26	0.45	
11	60	19.038	0.976	1.026.64	1.453.3	526.0	89.4	0.972	1.00	1.001	0.019	0.994	0.006	0.007	0.40	0.36	
12	60	18.506	0.976	1.026.76	1.422.6	526.2	89.4	0.985	1.01	1.000	-0.015	1.008	0.006	0.010	0.58	0.36	
13	60	18.038	0.976	1.026.24	1.453.8	526.5	89.6	0.995	1.02	1.001	-0.032	1.016	0.010	0.010	0.58	0.55	
14	60	17.490	0.976	1.026.74	1.453.0	526.1	89.4	0.988	1.01	1.000	-0.029	1.010	0.012	0.009	0.50	0.67	
15	60	16.932	0.975	1.026.29	1.453.2	525.3	89.5	0.964	0.97	1.001	0.006	0.997	0.019	0.005	0.44	1.04	
16	60	16.492	0.976	1.026.13	1.422.9	526.1	89.7	0.972	1.00	1.001	-0.005	1.003	0.017	0.007	0.38	0.95	
17	60	16.073	0.975	1.026.55	1.452.5	525.7	89.7	0.970	1.00	1.001	0.010	0.995	0.019	0.007	0.38	1.11	
18	60	15.554	0.975	1.026.31	1.422.7	525.0	89.5	0.973	1.00	1.001	0.005	0.998	0.018	0.005	0.30	1.04	
19	60	15.032	0.976	1.026.36	1.452.3	525.8	89.3	0.976	1.00	1.001	0.005	0.998	0.018	0.005	0.30	0.64	
20	60	14.557	0.976	1.026.0	1.422.4	526.1	89.4	0.970	0.99	1.000	0.010	0.995	0.019	0.005	0.29	1.08	
21	60	13.531	0.975	1.026.54	1.452.3	525.7	89.6	0.944	0.97	1.000	0.054	0.972	0.017	0.005	0.29	1.00	
22	60	12.990	0.976	1.027.16	1.422.6	526.1	89.6	0.969	0.99	1.002	0.015	0.993	0.017	0.006	0.34	1.00	
23	60	12.467	0.977	1.027.66	1.452.9	526.5	89.5	0.967	0.99	1.001	0.018	0.992	0.017	0.005	0.27	0.97	
24	60	12.042	0.975	1.026.66	1.422.3	525.7	89.6	0.965	0.99	1.001	0.019	0.991	0.017	0.005	0.28	0.97	
25	60	11.548	0.976	1.027.06	1.452.7	526.1	89.6	0.941	0.97	1.000	0.057	0.970	0.016	0.007	0.43	0.93	
26	60	10.948	0.976	1.026.96	1.452.2	526.1	89.3	0.961	0.99	1.001	0.018	0.992	0.016	0.005	0.27	0.91	
27	60	10.497	0.976	1.026.24	1.451.7	525.6	89.4	0.961	0.99	1.000	0.025	0.988	0.015	0.006	0.35	0.88	
28	60	9.931	0.976	1.026.10	1.422.0	525.3	89.1	0.949	0.99	1.000	0.012	0.994	0.015	0.006	0.36	0.89	
29	60	9.359	0.975	1.026.59	1.422.4	526.0	89.3	0.971	1.00	1.000	0.010	0.995	0.015	0.006	0.36	0.87	
30	60	8.843	0.976	1.026.52	1.451.5	525.6	89.2	0.973	1.00	1.001	0.005	0.998	0.016	0.006	0.37	0.81	
31	70	8.323	0.976	1.027.53	1.451.9	525.6	89.5	0.973	1.00	1.001	0.005	0.998	0.015	0.007	0.42	0.86	
32	60	7.849	0.976	1.027.31	1.422.6	526.3	89.4	0.978	1.00	1.000	-0.003	1.001	0.011	0.007	0.42	0.85	
33	60	7.347	0.976	1.027.15	1.451.0	525.5	89.1	0.972	1.00	1.000	-0.007	0.997	0.017	0.007	0.40	0.87	
34	60	6.895	0.976	1.026.96	1.452.5	526.1	89.4	0.976	1.00	1.001	-0.002	1.001	0.017	0.006	0.36	0.97	
35	60	6.524	0.976	1.026.59	1.452.4	526.1	89.4	0.975	1.00	1.001	0.003	0.999	0.019	0.006	0.37	0.99	
36	60	6.0434	0.976	1.027.06	1.452.3	526.0	89.4	0.973	1.00	1.000	0.009	0.999	0.019	0.006	0.33	1.11	
37	60	5.527	0.976	1.027.25	1.452.5	526.2	89.4	0.971	1.00	1.000	0.010	0.995	0.020	0.006	0.35	1.16	
38	60	4.935	0.976	1.026.70	1.452.2	525.9	89.3	0.970	0.99	1.001	0.012	0.994	0.020	0.005	0.30	1.16	
39	60	4.449	0.976	1.027.07	1.452.6	526.0	89.6	0.971	1.00	1.000	0.005	0.996	0.020	0.007	0.41	1.15	
40	60	3.942	0.976	1.027.16	1.452.5	526.2	89.3	0.966	0.99	1.001	0.020	0.990	0.020	0.005	0.30	1.13	
41	60	3.465	0.976	1.027.30	1.452.6	526.2	89.5	0.966	0.99	1.001	0.019	0.991	0.020	0.005	0.30	1.13	
42	60	2.934	0.976	1.027.09	1.452.6	526.0	89.5	0.965	0.99	1.001	0.019	0.991	0.020	0.005	0.30	1.13	
43	60	2.467	0.976	1.027.55	1.452.7	526.4	89.6	0.962	0.99	1.001	0.026	0.987	0.019	0.005	0.28	1.11	
44	60	2.038	0.976	1.027.31	1.452.3	525.9	89.3	0.964	0.99	1.001	0.057	0.972	0.017	0.005	0.29	1.01	
45	60	1.643	0.976	1.027.67	1.452.0	525.7	89.1	0.960	0.97	1.001	0.013	0.994	0.019	0.012	0.67	1.09	
46	60	1.012	0.976	1.027.10	1.452.6	526.1	89.7	0.942	0.97	1.001	0.061	0.970	0.018	0.004	0.24	1.09	
47	60	0.531	0.976	1.027.05	1.452.5	526.1	89.5	0.944	0.97	1.001	0.056	0.972	0.017	0.005	0.27	1.02	
48	60	0.098	0.976	1.026.75	1.452.3	525.4	89.5	0.944	0.97	1.001	0.055	0.973	0.015	0.006	0.36	0.90	
49	60	-0.504	0.975	1.026.50	1.452.4	525.7	89.6	0.949	0.97	1.000	0.054	0.973	0.015	0.008	0.46	0.89	
50	60	-1.052	0.975	1.026.29	1.451.8	525.0	89.2	0.943	0.97	1.000	0.058	0.972	0.014	0.011	0.63	0.84	
51	60	-1.045	0.976	1.026.76	1.452.5	525.6	89.5	0.944	0.97	1.000	0.055	0.973	0.014	0.006	0.34	0.83	
52	60	-1.074	0.975	1.026.17	1.452.2	525.0	89.5	0.946	0.97	1.000	0.051	0.973	0.015	0.006	0.35	0.89	
53	60	-2.444	0.975	1.026.15	1.452.0	525.4	89.5	0.944	0.97	1.000	0.055	0.973	0.015	0.006	0.36	0.90	
54	60	-3.664	0.975	1.026.23	1.451.9	525.4	89.6	0.944	0.97	1.000	0.054	0.973	0.015	0.008	0.46	0.89	
55	60	-3.505	0.975	1.026.08	1.452.0	525.3	89.7	0.943	0.97	1.000	0.052	0.972	0.014	0.011	0.63	0.84	
56	60	-4.062	0.975	1.026.68	1.451.6	525.1	89.4	0.946	0.97	1.000	0.054	0.973	0.015	0.006	0.35	0.89	
57	60	-4.062	0.975	1.026.17	1.452.0	525.2	89.5	0.947	0.97	1.000	0.051	0.973	0.015	0.007	0.39	0.82	
58	60	-5.079	0.974	1.026.07	1.452.0	524.9	89.0	0.944	0.97	1.000	0.050	0.974	0.014	0.006	0.35	0.85	
59	60	-5.012	0.975	1.026.06	1.452.1	524.9	89.5	0.944	0.97	1.000	0.051	0.973	0.014	0.006	0.37	0.83	

AEDC PROPHLUS WIND TUNNEL  
TRANSONIC TEST

TEST PAINT WEXLUS ALPHAN ALPHAN V1  
TP-445 74 2.991 5.076 PCT -0.02 -14.05 5 401  
WIND PLANE PLANE SURVEY SUMMARY

DATE 6-14-77

POINT GP	X1	Y1	Z1	V1	P1	U	V	W	RT	VL	VTL/V1M	MIL	UT/PT	CPL	UT/V1M	VL/V1M	W1/V1M	ANTL	SNTL
5 1	26.000	0.975	1027.63	1456.2	526.3	-90.6	0.972	1.00	-	1.000	-	0.006	0.993	-0.005	-0.005	-4.91	-0.31		
7 2	24.541	0.975	1027.64	1456.3	526.4	90.6	0.975	1.00	-	1.000	-	0.001	0.996	0.006	0.006	4.88	0.36		
9 3	23.045	0.975	1027.67	1456.7	527.0	90.7	0.975	1.00	-	1.000	-	0.001	0.996	0.004	0.004	4.87	0.35		
11 4	22.540	0.975	1027.68	1456.8	527.1	90.7	0.971	1.00	-	1.000	-	0.005	0.993	0.007	0.007	4.93	0.38		
13 5	22.074	0.975	1027.65	1455.5	526.4	90.6	0.941	1.01	-	1.000	-	-0.011	1.002	0.010	0.010	4.88	0.58		
15 6	21.536	0.975	1027.63	1455.3	526.6	90.7	0.978	1.00	-	1.000	-	-0.004	0.998	0.007	0.007	4.94	0.42		
17 7	21.036	0.975	1027.59	1455.4	526.8	90.7	0.983	1.01	-	1.000	-	-0.013	1.003	0.007	0.007	4.93	0.41		
19 8	20.545	0.975	1027.67	1456.4	526.4	91.0	0.994	1.03	-	1.003	-	-0.051	1.024	0.007	0.007	4.82	0.41		
21 9	20.033	0.975	1027.62	1456.7	526.6	90.7	0.988	1.01	-	1.000	-	-0.021	1.007	0.007	0.004	4.74	0.39		
23 10	19.530	0.975	1027.60	1456.4	526.2	90.6	0.947	1.01	-	1.000	-	-0.020	1.007	0.007	0.004	4.79	0.39		
25 11	19.026	0.975	1027.51	1454.4	526.2	90.2	0.945	1.01	-	1.000	-	-0.018	1.006	0.007	0.003	4.72	0.40		
27 12	18.542	0.975	1027.44	1454.6	526.4	90.8	0.940	1.00	-	1.000	-	-0.007	1.001	0.004	0.004	4.67	0.25		
29 13	18.036	0.975	1027.22	1453.8	526.1	90.5	0.976	1.00	-	1.000	-	-0.003	0.998	0.005	0.005	4.63	0.31		
31 14	17.521	0.975	1027.61	1454.0	526.3	90.6	0.976	1.00	-	1.000	-	-0.002	0.998	0.008	0.008	4.62	0.45		
33 15	17.045	0.976	1028.75	1456.0	526.5	90.9	0.973	1.00	-	1.000	-	-0.005	0.994	0.007	0.007	4.63	0.39		
35 16	16.541	0.976	1028.06	1454.1	526.6	90.6	0.964	0.99	-	1.001	-	-0.021	0.987	0.012	0.012	4.67	0.68		
37 17	16.023	0.976	1028.46	1451.6	526.5	90.7	0.960	0.99	-	1.000	-	-0.014	0.990	0.007	0.007	4.64	0.41		
39 18	15.524	0.976	1028.16	1453.3	526.3	90.4	0.963	0.99	-	1.000	-	-0.022	0.986	0.007	0.007	4.71	0.43		
41 19	15.031	0.976	1027.66	1453.4	526.2	90.4	0.944	0.97	-	1.000	-	-0.054	0.970	0.005	0.001	4.80	0.28		
43 20	14.536	0.976	1028.21	1453.3	526.3	90.9	0.976	1.00	-	1.001	-	-0.008	0.993	0.007	0.007	4.61	0.62		
45 21	14.022	0.976	1027.60	1452.7	526.0	90.6	0.958	0.99	-	1.000	-	-0.030	0.982	0.007	0.003	4.84	0.40		
47 22	13.534	0.976	1027.68	1452.7	526.9	90.8	0.942	0.97	-	1.000	-	-0.058	0.967	0.004	0.004	4.92	0.50		
49 23	13.034	0.975	1027.79	1452.9	526.9	90.9	0.944	0.97	-	1.000	-	-0.056	0.969	0.007	0.005	4.99	0.39		
51 24	12.543	0.976	1029.02	1452.4	526.0	90.7	0.945	0.97	-	1.000	-	-0.055	0.969	0.007	0.005	5.02	0.42		
53 25	12.034	0.976	1027.67	1452.1	525.7	90.6	0.958	0.99	-	1.000	-	-0.030	0.991	0.007	0.006	5.02	0.42		
55 26	11.532	0.976	1027.94	1452.6	526.0	90.8	0.959	0.99	-	1.000	-	-0.028	0.982	0.008	0.006	5.03	0.44		
57 27	11.033	0.975	1027.57	1452.5	525.7	90.9	0.961	0.99	-	1.000	-	-0.024	0.984	0.008	0.009	5.14	0.44		
59 28	10.531	0.976	1028.65	1452.3	526.2	90.8	0.967	0.99	-	1.000	-	-0.016	0.988	0.008	0.007	5.05	0.45		
61 29	10.024	0.977	1028.69	1452.7	526.6	90.4	0.971	0.99	-	1.000	-	-0.010	0.991	0.007	0.009	5.12	0.41		
63 30	9.529	0.974	1026.37	1452.1	524.9	90.9	0.970	1.00	-	1.000	-	-0.007	0.993	0.007	0.009	5.11	0.43		

-53-



DATE 14-77 AEDC PROPELLSION WING TUNNEL  
TRANSonic 16T

41 KIRI SURVEY  
-13.19 401

AEDC PHOPULSION WIND TUNNEL TRANSONIC 161

21 RUN SURVEY

THE BIBLE AND SCIENCE

POINT	GH	AI		VM		PI		U		ML		VTL/VM		UT/VM		VI/VM		WI/VM		AIL		SMIL	
		A1	A1	V1	V1	U1	U1	ML1	ML1	U1	U1	VTL1/VM1	VTL1/VM1	UT1/VM1	UT1/VM1	VI1/VM1	VI1/VM1	WI1/VM1	WI1/VM1	AIL1	AIL1	SMIL1	SMIL1
1	25	-4.4768	0.476	1027.45	1027.45	1440.5	1440.5	523.0	523.0	90.4	0.462	0.99	0.99	0.024	0.998	0.017	0.006	0.32	1.00	0.32	0.99	0.32	0.97
2	25	-3.4936	0.474	1026.74	1026.74	1444.7	1444.7	522.4	522.4	90.7	0.460	0.99	1.000	0.025	0.998	0.017	0.006	0.32	0.99	0.32	0.97	0.32	0.97
3	25	-2.4659	0.474	1025.79	1025.79	1445.2	1445.2	522.5	522.5	90.5	0.468	1.00	1.001	0.011	0.995	0.017	0.006	0.32	0.99	0.32	0.97	0.32	0.97
4	25	-2.0174	0.475	1021.40	1021.40	1446.9	1446.9	522.5	522.5	90.7	0.466	0.99	1.000	0.016	0.992	0.017	0.005	0.31	1.00	0.31	1.00	0.31	1.00
5	25	-0.9478	0.477	1027.60	1027.60	1448.7	1448.7	522.7	522.7	90.3	0.468	0.99	1.001	0.016	0.993	0.019	0.005	0.31	1.00	0.31	1.00	0.31	1.00
6	25	0.652	0.476	1027.12	1027.12	1451.4	1451.4	525.1	525.1	90.7	0.462	0.99	1.001	0.025	0.994	0.020	0.005	0.30	1.14	0.30	1.14	0.30	1.14
7	25	1.145	0.476	1027.56	1027.56	1452.2	1452.2	525.2	525.2	90.4	0.471	1.00	1.001	0.009	0.996	0.021	0.007	0.39	1.19	0.39	1.19	0.39	1.19
8	25	1.4648	0.477	1029.06	1029.06	1452.5	1452.5	526.6	526.6	90.7	0.463	0.99	1.001	0.026	0.988	0.021	0.005	0.28	1.20	0.28	1.20	0.28	1.20
9	25	3.013	0.475	1026.94	1026.94	1449.0	1449.0	524.4	524.4	90.3	0.443	0.97	1.000	0.056	0.972	0.023	0.005	0.30	1.33	0.30	1.33	0.30	1.33
10	25	3.465	0.475	1027.46	1027.46	1447.0	1447.0	523.4	523.4	90.5	0.459	0.99	1.000	0.028	0.986	0.022	0.005	0.30	1.30	0.30	1.30	0.30	1.30
11	25	4.656	0.476	1027.62	1027.62	1445.1	1445.1	523.2	523.2	90.4	0.465	0.99	1.000	0.019	0.990	0.023	0.004	0.25	1.34	0.25	1.34	0.25	1.34
12	25	6.165	0.475	1027.17	1027.17	1442.5	1442.5	522.0	522.0	90.6	0.470	1.00	1.000	0.009	0.995	0.023	0.006	0.36	1.33	0.36	1.33	0.36	1.33
13	25	7.037	0.475	1026.60	1026.60	1460.5	1460.5	521.1	521.1	90.2	0.474	1.00	1.002	0.004	0.999	0.022	0.010	0.58	1.25	0.58	1.25	0.58	1.25
14	25	8.046	0.475	1027.54	1027.54	1459.1	1459.1	520.9	520.9	90.7	0.482	1.01	1.001	-0.011	0.019	0.006	0.006	1.10	1.10	0.006	1.10	0.006	1.10
15	25	9.409	0.475	1026.65	1026.65	1457.6	1457.6	514.9	514.9	90.7	0.473	1.00	1.001	0.004	0.998	0.018	0.006	0.36	1.04	0.006	1.04	0.006	1.04
16	25	10.029	0.474	1027.38	1027.38	1463.0	1463.0	514.7	514.7	90.5	0.476	1.00	1.001	0.000	0.990	0.020	0.008	0.48	1.16	0.008	1.16	0.008	1.16
17	25	10.466	0.474	1026.85	1026.85	1435.6	1435.6	519.2	519.2	90.4	0.469	1.00	1.001	0.011	0.995	0.021	0.006	0.36	1.22	0.006	1.22	0.006	1.22
18	25	11.936	0.475	1026.66	1026.66	1435.2	1435.2	519.2	519.2	90.4	0.465	0.99	1.001	0.017	0.992	0.022	0.007	0.41	1.29	0.007	1.29	0.007	1.29
19	25	13.041	0.475	1027.16	1027.16	1435.6	1435.6	519.5	519.5	90.6	0.464	0.99	1.001	0.021	0.990	0.023	0.006	0.35	1.34	0.006	1.34	0.006	1.34
20	25	14.017	0.475	1027.13	1027.13	1439.9	1439.9	521.0	521.0	90.7	0.480	1.00	1.001	-0.006	1.004	0.026	0.009	0.51	1.46	0.009	1.46	0.009	1.46
21	25	15.066	0.475	1027.39	1027.39	1442.2	1442.2	521.9	521.9	90.8	0.482	1.01	1.001	-0.009	1.005	0.027	0.010	0.55	1.52	0.010	1.52	0.010	1.52
22	25	15.965	0.475	1027.30	1027.30	1442.4	1442.4	522.3	522.3	90.4	0.481	1.00	1.001	-0.008	1.004	0.027	0.011	0.63	1.55	0.011	1.55	0.011	1.55
23	25	17.146	0.475	1027.53	1027.53	1444.8	1444.8	522.9	522.9	90.7	0.492	1.01	1.001	-0.027	1.014	0.026	0.014	0.79	1.46	0.014	1.46	0.014	1.46
24	25	17.919	0.475	1027.51	1027.51	1445.3	1445.3	523.1	523.1	90.7	0.471	1.03	1.001	-0.060	1.030	0.022	0.016	0.90	1.22	0.016	1.22	0.016	1.22
25	25	19.061	0.476	1029.20	1029.20	1444.2	1444.2	523.1	523.1	90.6	0.439	1.05	1.001	-0.105	1.053	0.014	0.020	1.08	0.76	0.020	1.08	0.020	1.08
26	25	19.143	0.476	1028.15	1028.15	1443.0	1443.0	522.7	522.7	90.6	0.460	1.07	1.000	-0.141	1.070	0.006	0.023	1.24	0.34	0.023	1.24	0.023	1.24
27	25	21.062	0.475	1027.18	1027.18	1440.9	1440.9	521.3	521.3	90.7	0.439	0.97	1.000	-0.062	0.968	0.009	0.027	0.59	0.55	0.027	0.55	0.027	0.55
28	25	21.464	0.474	1026.35	1026.35	1440.1	1440.1	520.7	520.7	90.6	0.467	0.99	1.000	-0.017	0.993	0.013	0.026	1.48	0.74	0.026	1.48	0.026	1.48
29	25	22.437	0.475	1026.72	1026.72	1439.3	1439.3	520.6	520.6	90.5	0.491	1.00	1.000	-0.007	0.996	0.007	0.025	1.42	0.43	0.007	1.42	0.007	1.42
30	25	23.845	0.474	1026.75	1026.75	1439.4	1439.4	520.5	520.5	90.8	0.463	0.99	1.000	0.020	0.990	0.015	0.024	1.38	0.85	0.015	1.38	0.015	1.38

Digitized by srujanika@gmail.com

TEST PART MEXICO-6 ALFAFIN W146 Y1 ZT MZN SURVEY  
TP=445 85 2.947 -5.124 PLI 0.00 -14.14 5 501

OUTLINE FLOORFIELD SURVEY SUMMARY

POINT GP	X1	Y1	Z1	PLI	VTL/VN	PIL/PIT	CPL	UI/VN	VT/VN	WI/VM	AATL	SNTL
0 25	-5.047	0.975	1027.18	1464.9	529.6	0.96	0.09	1.001	0.017	0.992	0.007	0.33
1 25	-4.104	0.975	1027.12	1464.9	521.2	90.5	0.972	1.00	1.001	0.007	0.006	0.46
2 25	-3.024	0.974	1026.12	1452.5	524.4	90.8	0.986	1.01	1.003	-0.020	1.012	0.29
4 25	-1.975	0.974	1026.14	1452.0	524.9	90.5	0.941	0.97	1.000	0.057	0.008	0.25
5 25	-1.056	0.976	1026.01	1452.4	526.4	90.5	0.945	0.99	1.001	0.016	0.004	0.22
6 25	-0.033	0.977	1026.14	1454.8	527.4	90.6	0.962	0.99	1.001	0.027	0.008	0.12
7 25	1.017	0.976	1026.53	1450.6	525.7	90.7	0.941	0.97	1.000	0.061	0.007	0.01
8 25	2.031	0.973	1026.31	1451.2	526.1	90.6	0.958	0.99	1.001	0.027	0.008	-0.001
9 25	3.040	0.975	1026.67	1454.4	526.4	90.4	0.946	0.99	1.001	0.017	0.007	-0.01
10 25	4.064	0.971	1024.78	1452.7	526.5	90.7	0.967	0.99	1.000	0.015	0.002	-0.12
11 25	4.977	0.977	1024.80	1451.4	526.0	90.7	0.971	1.00	1.000	0.010	0.004	-0.16
12 25	4.345	0.976	1024.12	1450.4	525.3	90.7	0.977	1.00	1.000	-0.001	1.001	0.007
14 25	6.949	0.975	1027.09	1452.3	525.5	90.6	0.992	1.01	1.001	-0.028	1.014	0.012
15 25	7.944	0.975	1027.14	1452.4	525.5	90.6	0.992	1.01	1.000	-0.029	1.015	0.005
16 25	8.979	0.976	1027.46	1451.7	525.6	90.4	0.985	1.01	1.000	-0.016	1.008	0.005
17 25	10.017	0.976	1027.64	1451.1	525.7	90.1	0.981	1.00	1.001	-0.007	1.004	0.004
18 25	10.943	0.974	1026.30	1450.6	524.9	89.8	0.988	0.99	1.000	0.013	0.994	0.007
19 25	11.947	0.974	1026.45	1450.9	524.4	90.1	0.977	1.00	1.001	-0.003	1.002	0.004
20 25	13.007	0.975	1026.36	1452.0	525.2	90.1	0.982	1.01	1.000	-0.013	1.007	0.002
21 25	13.991	0.975	1026.34	1452.1	525.6	90.1	0.992	1.01	1.000	-0.028	1.014	0.005
22 25	14.978	0.974	1026.66	1452.3	525.2	89.7	0.996	1.02	1.001	-0.036	1.018	0.008
23 25	15.973	0.975	1026.24	1453.3	525.6	90.1	1.002	1.02	1.001	-0.046	1.023	0.008
24 25	17.036	0.974	1025.72	1453.7	525.5	90.0	1.010	1.03	1.001	-0.060	1.030	0.009
25 25	17.940	0.974	1025.84	1454.1	525.7	90.1	1.014	1.04	1.000	-0.075	1.037	0.009
26 25	19.073	0.974	1025.52	1454.0	525.8	90.0	1.03	1.05	1.001	-0.107	1.054	0.009
27 25	20.019	0.974	1025.08	1454.5	525.5	89.7	1.04	1.06	1.000	-0.125	1.062	0.009
28 25	20.946	0.973	1024.92	1453.5	525.0	90.0	0.981	1.01	1.000	-0.014	1.006	0.007
29 25	22.024	0.973	1025.01	1453.5	525.0	90.1	0.937	0.97	1.000	0.062	0.968	0.008
30 25	22.975	0.974	1025.32	1452.0	525.1	89.9	0.938	0.97	1.000	-0.061	0.969	0.007
31 25	24.063	0.973	1024.97	1451.04	524.4	89.8	0.941	0.97	1.000	0.057	0.971	0.008

DATE AFUC PROPULSION WIND TUNNEL  
4-14-77 TRANSONIC 16T

DATE 4-12-77 AEUC PROPULSION WIND TUNNEL  
THANSONIC 16T

TEST NO. 16-465 DATE 4-10-77 SURVEY 2 HIN 30H  
25 - 3000ft 0.015 & 0.01

INNEK PI.(INFELD) SURVEY SUMMARY

POINT GP	X	Y	Z	PT	TT	ML	VML/VM	PTL/PT	CPL	UL/VM	VL/VM	WL/WM	AL	SWL	
1	18.457	1.025	1010.07	1433.6	541.1	49.9	1.010	0.99	0.948	0.922	0.911	0.002	0.11	0.64	
2	18.483	1.025	1010.95	1433.6	540.6	49.6	0.94	0.97	0.947	0.974	0.015	-0.010	0.60	0.86	
3	18.040	1.026	1010.94	1435.0	542.0	49.7	1.134	1.019	0.994	0.943	0.015	0.029	1.54	0.78	
4	17.538	1.028	1012.43	1433.7	542.0	49.7	1.210	1.14	0.993	0.923	1.137	0.008	0.070	3.51	0.39
5	17.038	1.023	1064.06	1433.6	540.2	49.7	1.164	1.11	0.994	0.929	1.111	0.005	0.044	2.25	0.26
6	16.527	1.026	1071.05	1431.9	540.7	49.7	1.093	1.05	0.993	0.953	0.002	-0.012	-0.64	-0.13	
7	16.034	1.025	1030.15	1434.5	541.2	49.6	1.046	1.02	0.999	0.914	1.016	-0.001	-0.03	-0.09	
8	15.545	1.025	1011.21	1434.4	541.7	49.5	1.017	0.99	0.999	0.942	0.001	-0.009	-0.51	-0.05	
9	15.046	1.027	1011.04	1433.9	542.0	49.4	1.000	0.98	1.000	0.943	0.918	0.001	-0.020	-1.16	0.05
10	14.537	1.025	1016.20	1433.2	540.8	49.6	0.94	0.97	0.999	0.960	0.969	0.005	-0.027	-1.60	0.30
11	14.037	1.024	1019.28	1431.9	539.9	49.4	0.977	0.97	0.999	0.977	0.960	0.011	-0.034	-2.04	0.63
12	13.538	1.025	1016.56	1431.6	540.3	49.9	0.941	0.93	0.999	0.930	0.019	-0.040	-0.040	-1.14	-2.44
13	13.030	1.025	1010.54	1432.9	540.7	49.0	0.936	0.93	1.000	0.947	0.925	0.030	-0.039	-2.35	1.85
14	12.537	1.025	1069.50	1432.6	540.3	49.5	0.932	0.92	0.999	0.952	0.922	0.038	-0.026	-1.61	2.33
15	12.041	1.025	1070.41	1433.5	541.1	49.7	0.942	0.93	0.999	0.936	0.931	0.029	-0.014	-0.87	1.78
16	11.544	1.025	1070.67	1434.7	541.7	49.7	0.942	0.93	0.999	0.936	0.930	0.029	-0.008	-0.48	1.81
17	11.041	1.026	1071.33	1435.6	542.2	49.6	0.95	0.999	0.999	0.950	0.022	-0.005	-0.28	1.35	
18	10.537	1.026	1070.66	1436.4	542.2	49.8	0.994	0.97	0.999	0.949	0.974	0.015	-0.002	-0.12	0.86

TEST POINT DATE AEDC PROPULSION WIND TUNNEL

TP=685 4-12-77 TRANSONIC 161

4-12-77

INNER FLOWFIELD SURVEY SUMMARY

POINT GP	X	Y	W	V	W/V	PT	G	TT	ML	VM	W/V	CPL	UL/VW	VL/VW	WL/VW	AAL	SIL
7	1	19.027	1.025	1070.14	1432.5	540.4	540.4	1.034	1.01	0.944	-0.016	1.005	0.052	0.045	2.58	2.94	
9	2	18.537	1.025	1070.06	1433.3	540.6	540.6	1.030	1.010	0.997	-0.011	1.001	0.053	0.052	2.96	3.01	
11	3	18.029	1.021	1071.65	1426.9	544.9	89.5	1.120	1.07	0.999	-0.148	1.070	0.050	0.070	3.76	2.68	
13	4	17.536	1.025	1070.20	1430.7	539.5	89.8	1.065	1.05	0.997	-0.100	1.045	0.040	0.058	3.20	2.19	
15	5	17.026	1.025	1070.74	1436.4	542.0	49.5	1.061	1.03	0.999	-0.054	1.027	0.033	0.044	2.45	1.96	
17	6	16.517	1.025	1070.36	1435.5	543.5	49.9	1.060	0.98	1.000	0.030	0.954	0.035	0.023	1.34	2.05	
19	7	16.024	1.026	1071.04	1430.7	540.1	90.0	0.971	0.95	1.003	0.094	0.954	0.039	0.010	0.60	2.33	
21	8	15.532	1.025	1069.62	1426.7	536.3	89.4	0.940	0.93	1.002	0.144	0.928	0.044	0.005	0.30	2.70	
23	9	15.025	1.025	1070.60	1430.7	539.7	89.7	0.922	0.92	1.000	0.169	0.914	0.049	-0.002	-0.12	3.06	
25	10	14.519	1.026	1070.75	1431.2	540.2	89.8	0.906	0.40	1.000	0.198	0.899	-0.007	-0.44	3.84		
27	11	14.031	1.025	1070.10	1432.6	540.6	89.6	0.949	0.90	1.002	0.212	0.993	0.068	-0.000	-0.03	4.38	
29	12	13.526	1.026	1070.58	1434.9	541.6	89.7	0.876	0.87	1.002	0.252	0.871	0.084	-0.005	0.34	5.50	
31	13	13.032	1.026	1071.29	1433.4	541.4	89.9	0.857	0.86	1.002	0.246	0.851	0.104	0.028	1.87	7.00	
33	14	12.527	1.026	1070.97	1430.1	539.8	90.0	0.873	0.87	1.001	0.256	0.863	0.101	-0.072	4.74	6.65	
35	15	12.017	1.026	1071.01	1432.1	540.7	89.9	0.904	0.90	1.001	0.203	0.891	0.076	0.093	5.94	4.86	
37	16	11.530	1.026	1070.46	1436.0	542.0	89.7	0.922	0.91	1.002	0.173	0.908	0.056	0.096	6.06	3.50	
39	17	11.033	1.026	1071.18	1437.6	542.9	89.8	0.933	0.92	1.001	0.155	0.918	0.042	0.094	5.86	2.64	
41	18	10.519	1.026	1070.82	1436.7	542.3	89.8	0.934	0.92	0.995	0.145	0.919	0.033	0.093	5.79	2.03	

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TEST PAINT MEXICO-6 ALFAHM WING Y MIN SURVEY  
 F=445 31 3.054 -5.074 PCT 4.07 -1.12 4 30H

DATE AEDC PROPULSION WIND TUNNEL  
 4-12-77 TRANSONIC 16T

INATED PLOWFIELD SURVEY SUMMARY

POINT GP	A	M	V.M.	PT	TT	ML	VML/V.M.	PTL/PT	CPL	UL/VN	WL/VN	AAL	SWL
11 1	19.159	1.026	1071.05	1435.6	542.2	90.0	1.017	0.99	0.995	0.992	-0.029	-1.08	-1.68
13 2	18.508	1.026	1071.63	1435.6	542.3	90.1	0.976	0.96	0.051	0.958	-0.022	-1.075	-1.32
36 2	17.471	1.025	1069.66	1433.1	540.7	90.5	1.295	1.20	0.978	0.409	-0.035	0.075	3.61
43 2	17.971	1.025	1070.20	1433.0	540.7	89.8	1.291	1.20	0.979	0.411	-0.038	0.075	3.59
47 2	17.971	1.025	1070.30	1433.4	540.8	89.9	1.290	1.20	0.979	0.410	-0.034	0.075	3.61
49 3	17.575	1.024	1069.24	1432.1	539.9	89.6	1.289	1.20	0.979	0.410	-0.034	0.075	3.60
51 4	17.521	1.025	1070.28	1432.6	540.4	90.1	1.273	1.19	0.982	0.185	-0.037	0.062	3.01
53 5	16.943	1.025	1069.49	1432.2	540.1	89.6	1.234	1.16	0.942	0.324	-0.032	0.023	1.14
55 6	16.524	1.025	1069.94	1432.2	540.2	90.0	1.220	1.15	0.994	0.402	-0.038	0.023	1.60
57 7	16.019	1.025	1070.44	1432.7	540.7	89.8	1.208	1.14	0.994	0.36	-0.036	0.023	1.90
59 8	15.506	1.026	1070.83	1432.9	540.9	89.9	1.201	1.14	0.994	0.285	-0.036	-0.005	-0.27
61 9	15.027	1.026	1071.29	1433.4	541.2	90.1	1.167	1.12	0.996	0.251	-0.017	-0.046	-2.32
63 10	14.521	1.025	1070.35	1433.1	540.8	89.7	1.162	1.12	0.996	0.251	-0.048	-0.030	-1.54
65 11	13.995	1.025	1070.79	1433.4	540.9	90.1	1.175	1.12	0.995	0.245	-0.054	-0.038	-2.46
67 12	13.521	1.025	1070.40	1433.2	540.9	89.7	1.226	1.15	0.995	0.236	-0.119	-0.054	-2.75
69 13	13.019	1.026	1071.24	1433.0	541.3	90.0	1.206	1.14	0.988	0.315	-1.149	-0.085	-1.86
71 14	12.512	1.026	1070.61	1433.8	541.4	89.5	1.065	1.03	1.000	0.061	1.123	-0.124	-6.29
73 15	12.029	1.025	1070.51	1433.6	541.0	89.8	0.978	0.96	1.001	0.079	1.018	-0.029	-1.65
75 16	11.520	1.027	1071.90	1434.4	541.9	89.9	0.943	1.001	0.951	0.011	-0.120	-0.140	-7.42
77 17	10.997	1.027	1071.66	1434.9	542.0	90.0	0.961	0.95	1.002	0.109	0.923	0.023	1.41
										0.940	0.019	-0.109	-6.60

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AD-A062 275 NIELSEN ENGINEERING AND RESEARCH INC MOUNTAIN VIEW CALIF F/G 1/3  
DATA REPORT FOR A TEST PROGRAM TO STUDY TRANSONIC FLOW FIELDS A--ETC(U)  
JUL 77 S C PERKINS, S S STAHLARA, M J HEMSCHE F44620-75-C-0047  
UNCLASSIFIED NEAR-TR-138-VOL-6 AFOSR-TR-78-1490 NL

2 OF 2  
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TEST PART REFLUXION ALFA MIN WING Y  
TF645 63 3.012 -0.012 PCT -4.00 -1.00 2 RUN SURVEY

DATE 4-13-77 AEDC PROPULSION WIND TUNNEL  
TRANSonic TAT

INNER FLOWFIELD SURVEY SUMMARY

POINT GP	X	Y	Z	PT	VL	UL	TL	VL/VM	UL/VM	CPL	VL/VM	UL/VM	AL	SWL
1	0	10.002	1.025	1001.16	1460.1	554.1	100.6	1.014	0.99	1.000	0.012	0.493	0.010	0.028
2	0	10.002	1.024	1070.46	1471.6	554.6	100.5	1.034	1.01	1.000	-0.017	1.008	0.010	0.023
3	0	10.002	1.024	1009.37	1432.5	555.2	101.0	0.976	0.96	1.000	0.079	0.961	-0.003	0.002
4	0	10.941	1.024	1009.37	1432.5	555.2	101.0	0.976	0.96	1.000	0.079	0.961	-0.003	0.002
5	0	12.005	1.024	1080.20	1471.0	554.6	101.0	0.939	0.93	1.000	0.141	0.930	-0.016	-0.47
6	0	13.014	1.025	1079.36	1470.5	553.9	101.0	0.930	0.92	1.000	0.155	0.922	-0.014	-0.024
7	0	13.947	1.026	1077.59	1470.2	554.1	101.1	0.944	0.93	1.000	0.130	0.935	0.007	-0.021
8	0	15.041	1.023	1074.44	1470.1	553.4	101.1	0.992	0.97	1.000	0.051	0.974	0.018	-0.013
9	0	16.035	1.022	1077.76	1469.1	552.9	100.6	1.036	1.01	1.000	-0.023	1.011	-0.021	0.002
10	0	17.036	1.021	1077.42	1472.2	553.4	100.6	1.156	1.11	0.998	-0.211	1.104	0.053	2.73
11	0	17.946	1.025	1070.17	1474.2	556.1	100.2	1.122	1.08	0.993	-0.161	1.076	0.009	0.034
12	0	19.009	1.026	1061.63	1474.8	556.9	100.6	1.034	1.01	0.999	-0.014	1.006	0.007	-0.004

TEST PANT MEXICO ALFA HAD 1016  
TF-645 64 3.006 -0.026 4 PCU

DATE AEDC PROPELLSION WIND TUNNEL  
4-13-71 TRANSonic 161

INNER FLOWFIELD SURVEY SUMMARY

POINT GP	X	Y	Z	HIN	VMIN	SURVEY	PT	0	TT	ML	VM/L	P/L/PT	CPL	UL/VM	VL/VM	WL/VM	AAL	SWL
2 0	15.000	1.021	1077.21	1471.6	553.6	100.5	1.03	1.00	-0.055	1.03	1.000	-0.055	1.028	0.013	0.012	0.67	0.73	
3 0	13.6641	1.026	1081.41	1473.6	556.2	100.4	1.03	1.00	-0.055	1.03	1.000	-0.055	1.027	0.015	0.015	0.65	1.01	
4 0	18.373	1.021	1081.12	1472.7	556.3	100.7	1.051	1.02	0.998	1.051	1.002	0.998	1.024	0.024	0.022	1.21	1.35	
5 0	18.0107	1.027	1082.79	1472.3	556.5	100.7	1.057	1.03	0.946	1.057	1.031	0.946	1.034	0.034	0.033	1.84	1.91	
6 0	17.650	1.027	1082.48	1471.4	555.9	100.8	1.069	1.05	0.946	1.069	1.046	0.946	1.039	0.043	0.043	2.35	2.14	
7 0	17.314	1.027	1082.08	1470.5	555.6	100.3	1.096	1.05	-0.947	1.096	1.12	-0.947	1.053	0.035	0.041	2.25	1.93	
8 0	16.966	1.027	1082.37	1470.5	555.6	100.6	1.094	1.05	0.946	1.094	1.08	0.946	1.052	0.037	0.037	2.03	1.56	
9 0	16.645	1.026	1081.62	1469.6	555.0	100.7	1.046	1.05	1.000	1.046	1.000	1.000	1.047	0.046	0.021	1.60	1.17	
10 0	16.346	1.026	1081.60	1469.6	554.5	100.7	1.075	1.04	1.000	1.075	1.039	1.000	1.079	0.016	0.016	0.021	1.13	0.98
11 0	16.031	1.026	1081.51	1469.0	554.0	100.6	1.065	1.03	1.000	1.065	1.031	1.000	1.061	0.012	0.013	0.013	0.70	0.67
12 0	15.657	1.027	1082.25	1469.5	555.1	100.7	1.046	1.03	1.000	1.046	1.029	1.000	1.015	0.009	0.009	0.000	0.00	0.49
13 0	15.356	1.026	1081.47	1469.3	554.8	100.5	1.042	1.01	1.001	1.042	1.024	1.001	1.012	0.009	0.009	0.001	0.00	0.49
14 0	15.042	1.027	1082.72	1471.2	556.1	100.6	1.023	1.00	1.000	1.023	1.000	1.000	0.996	0.005	0.005	0.012	0.31	
15 0	14.663	1.025	1080.25	1471.1	554.8	100.6	1.017	0.99	1.000	1.017	1.013	0.994	0.994	0.003	0.003	0.012	0.20	
16 0	14.303	1.025	1080.02	1471.6	555.1	100.2	1.012	0.99	1.001	1.012	1.021	0.990	0.990	0.002	0.002	0.017	1.00	
17 0	14.012	1.025	1080.00	1472.1	555.3	100.3	1.006	0.98	1.001	1.006	1.032	0.985	0.985	0.002	0.002	0.021	1.19	
18 0	13.637	1.025	1080.38	1472.5	555.6	100.1	0.996	0.98	1.000	0.996	1.048	0.976	0.976	0.001	0.001	0.024	1.44	
19 0	13.325	1.025	1080.29	1472.9	555.7	100.2	0.983	0.97	1.001	0.983	1.070	0.965	0.965	0.001	0.001	0.031	1.63	
20 0	13.004	1.026	1081.32	1474.0	556.0	100.4	0.965	0.97	1.001	0.965	1.067	0.966	0.966	0.001	0.001	0.032	1.49	
21 0	12.676	1.026	1081.18	1473.1	556.5	100.4	0.975	0.96	1.001	0.975	1.083	0.958	0.958	0.000	0.000	0.036	2.13	
22 0	12.322	1.026	1081.21	1473.4	556.4	100.4	0.965	0.95	1.001	0.965	1.01	0.949	0.949	0.002	0.002	0.040	2.39	
23 0	12.007	1.026	1081.42	1473.6	556.4	100.4	0.959	0.95	1.000	0.959	1.010	0.944	0.944	0.004	0.004	0.042	2.57	
24 0	11.672	1.026	1081.79	1473.2	556.4	100.6	0.941	0.93	1.000	0.941	1.041	0.929	0.929	0.006	0.006	0.045	2.75	
25 0	11.317	1.027	1082.92	1473.1	556.7	100.4	0.940	0.93	1.000	0.940	1.043	0.927	0.927	0.013	0.013	0.044	2.71	
26 0	10.975	1.027	1082.31	1472.5	556.4	100.6	0.938	0.93	1.000	0.938	1.046	0.926	0.926	0.018	0.018	0.038	2.35	
27 0	10.649	1.027	1082.39	1471.7	556.2	100.3	0.970	0.95	1.000	0.970	1.053	0.953	0.953	0.021	0.021	0.025	1.49	
28 0	10.324	1.026	1083.07	1471.5	556.4	100.5	1.003	0.98	1.000	1.003	1.041	0.979	0.979	0.021	0.021	0.022	0.62	
29 0	9.994	1.027	1081.83	1470.2	555.5	100.1	1.020	0.99	1.000	1.020	1.011	0.994	0.994	0.019	0.019	0.015	1.07	

TEST	PART	REL V-6	ALFA 4	ALFA 5	V1	ZT	WIND	SURVEY	DATE	AEDC PROPULSION WIND TUNNEL	TRANSonic 16T
TF-445	4H	3.007	-0.014	PC1	-0.02	-14.15	5	401	4-13-77		

TEST PAINT REFLX=6 ALFM4 0.007 -0.004 0.001 Y1 -0.002 =-0.005 SURVEY 5 401 DATE 4-13-77 AEDC PROPULSION WIND TUNNEL TRANSONIC 167

TEST PART HEIGHT ALFHM WING 11  
TP-005 49 3.0006 -0.01 & pCI -0.01 -14.16 401  
OUTLET PLATE ITLU SURVEY SUMMARY

DATE AEDC PROPULSION MIND TUNNEL  
4-13-77 TRANSONIC 1&1

POINT GP	A1	A2	V1	V2	U1	U2	VL/VM	VL/PT	CPL	UT/VM	UT/PT	W1/VM	W1/PT	SWTL
2 48	-0.542	1.025	1069.36	1435.0	541.2	89.4	0.974	0.96	1.000	0.043	0.959	0.004	-0.01	-0.23
4 49	0.036	1.026	1064.42	1435.5	541.4	89.6	0.977	0.96	1.001	0.079	0.961	0.004	0.03	0.24
6 50	-0.057	1.025	1070.50	1435.7	541.6	89.8	0.979	0.96	1.000	0.079	0.962	0.005	0.02	0.27
8 51	-0.041	1.025	1069.44	1435.6	541.6	89.6	0.984	0.97	1.000	0.067	0.967	0.004	0.03	0.22
10 52	-1.055	1.025	1070.70	1435.7	541.7	89.8	0.984	0.97	1.001	0.068	0.966	0.004	-0.03	0.22
12 53	-1.060	1.025	1070.40	1435.5	541.6	89.9	0.992	0.97	1.001	0.055	0.973	0.004	0.04	0.25
14 54	-2.045	1.025	1070.19	1435.1	541.4	89.8	0.998	0.98	1.001	0.046	0.978	0.004	0.06	0.25
16 55	-2.060	1.025	1070.44	1435.3	541.7	89.7	1.001	0.94	1.000	0.040	0.980	0.004	0.03	0.24
18 56	-3.046	1.025	1070.09	1434.9	541.3	89.9	0.990	0.97	1.000	0.057	0.972	0.004	0.04	0.23
20 57	-3.062	1.025	1070.05	1435.2	541.6	89.5	1.001	0.98	1.001	0.041	0.980	0.004	0.05	0.26
22 58	-4.066	1.025	1069.35	1434.4	541.0	89.3	0.994	0.98	1.001	0.050	0.975	0.004	0.05	0.25
24 59	-4.066	1.025	1069.69	1434.9	541.3	89.6	0.995	0.98	1.000	0.049	0.976	0.004	0.05	0.26
26 60	-5.070	1.025	1070.44	1435.2	541.6	89.7	0.997	0.98	1.000	0.045	0.977	0.005	0.06	0.25
28 61	-5.076	1.025	1069.99	1434.9	541.4	89.6	0.998	0.98	1.000	0.044	0.978	0.004	0.05	0.26

TEST PAINT MEXICO-6 ALTITUDE 4166' 21 MJD SURVEY  
 TF-665 50 3.002 -0.011 \* PCT 14.16 0.03 5 403  
 WILTON FLIGHT FIELD SURVEY SUMMARY

POINT #	A1	A2	V1	V2	M1	M2	V1L/VM	V1L/VM	CPL	V1/VM	V1/VM	W1/WM	W1/WM	ATL	SMIL
6	1	25.046	1.025	1070.72	1434.0	541.1	89.6	0.999	0.48	1.000	0.043	0.978	0.010	0.005	0.59
6	2	23.566	1.024	1069.09	1433.9	540.6	89.4	0.996	0.98	1.000	0.046	0.977	0.010	0.004	0.61
8	3	23.042	1.025	1069.41	1435.4	541.0	89.4	1.003	0.98	1.000	0.036	0.982	0.010	0.004	0.59
10	4	22.546	1.026	1070.30	1435.5	541.4	89.4	0.99	1.000	0.029	0.985	0.009	0.004	0.21	0.54
12	5	22.046	1.026	1070.50	1435.7	541.9	89.7	1.013	0.99	1.001	0.021	0.990	0.009	0.005	0.51
14	6	21.542	1.026	1070.57	1436.0	542.2	89.6	1.011	0.99	0.999	0.023	0.988	0.006	0.005	0.37
16	7	21.043	1.025	1070.72	1436.9	542.3	90.0	1.052	1.02	1.000	-0.044	1.021	0.000	0.014	0.78
18	8	20.561	1.026	1070.62	1436.9	542.3	89.8	1.070	1.04	0.999	-0.072	1.036	-0.004	0.018	0.97
20	9	20.044	1.025	1070.33	1437.1	542.3	89.9	1.068	1.03	1.002	-0.055	1.034	-0.001	0.017	0.93
22	10	19.529	1.026	1070.78	1437.4	542.5	90.0	1.056	1.02	1.000	-0.048	1.024	0.003	0.011	0.59
24	11	19.032	1.026	1070.58	1437.0	542.3	89.8	1.043	1.01	1.000	-0.027	1.014	0.006	0.008	0.32
26	12	18.564	1.025	1070.08	1436.6	542.1	89.5	1.033	1.01	1.000	-0.013	1.007	0.010	0.006	0.33
28	13	18.037	1.025	1070.32	1436.7	542.2	89.7	1.024	1.00	1.000	-0.002	0.999	-0.011	0.004	0.23
30	14	17.540	1.026	1070.62	1437.1	542.5	89.9	1.016	0.99	1.000	0.016	0.992	0.014	0.002	0.40
32	15	17.037	1.026	1070.80	1436.1	542.1	89.9	1.009	0.99	1.001	0.029	0.986	0.016	0.001	0.96
34	16	16.534	1.026	1070.93	1435.0	541.7	89.9	0.998	0.98	1.001	0.046	0.977	0.016	0.002	0.09
36	17	16.035	1.026	1071.41	1436.4	541.7	90.0	0.994	0.97	1.000	0.054	0.973	0.016	0.001	0.03
38	18	15.536	1.027	1071.74	1439.9	541.6	90.0	0.994	0.97	1.001	0.053	0.974	0.018	0.000	0.04
40	19	15.042	1.027	1071.56	1432.6	541.0	89.9	1.008	0.98	1.000	0.035	0.985	0.019	0.000	0.01
42	20	14.538	1.027	1071.26	1432.0	540.9	89.6	0.990	0.97	1.001	0.060	0.970	0.018	0.001	0.05
44	21	14.043	1.025	1070.44	1430.6	539.9	89.9	0.947	0.97	1.000	0.063	0.963	0.017	0.002	0.09
46	22	13.535	1.025	1070.07	1429.2	539.3	89.8	0.983	0.97	1.000	0.069	0.965	0.017	0.002	0.13
48	23	13.056	1.025	1070.42	1429.4	539.3	90.0	0.995	0.98	1.000	0.049	0.976	0.011	0.004	0.22
50	24	12.529	1.025	1070.16	1429.1	539.1	90.1	1.018	0.99	1.000	0.012	0.994	0.010	0.009	0.57
52	25	12.034	1.026	1070.42	1432.3	540.6	90.1	1.035	1.01	1.001	-0.014	1.008	0.008	0.010	0.43
54	26	11.531	1.025	1070.04	1430.4	539.6	89.9	1.022	1.00	1.000	0.005	0.997	0.009	0.008	0.48
56	27	11.020	1.025	1070.25	1426.2	536.2	89.7	1.011	0.99	1.000	0.022	0.989	0.011	0.010	0.61
58	28	10.534	1.025	1070.18	1427.0	536.6	89.8	1.018	0.99	1.000	0.012	0.994	0.011	0.007	0.43
60	29	10.037	1.025	1069.97	1431.4	540.0	89.6	1.018	0.99	1.000	0.012	0.994	0.013	0.006	0.77
62	30	9.525	1.025	1070.35	1433.3	540.8	89.8	1.012	0.99	1.000	0.022	0.989	0.015	0.004	0.22

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DATE 13-7-77 - AEUDC PROPULSION WIND TUNNEL  
TRANSOMIC 161

Date 1-12-77

CIVIL ENGINEERING SURVEY SUMMARY

TEST	PANT	MEXICO-6		ALPHA		BETA		YI		ZI		MUN SURVEY	
		TF-445	SI	2.045	-0.01	0.01	PCT	14.16	0.02	5	403	OUTEN FLOWFIELD SURVEY SUMMARY	
POINT	64	X1	H	V1	H	V1	H	V1	H	V1	H	VI/VW	VI/VW
1	31	9.028	0.025	1069.41	1431.01	539.6	89.8	1.006	0.98	1.000	0.012	0.984	0.016
3	32	8.0542	1.025	1069.45	1430.6	539.7	89.7	1.000	0.98	1.000	0.041	0.979	0.017
5	33	8.0334	1.025	1070.17	1431.6	540.1	89.6	0.985	0.97	0.994	0.043	0.967	0.018
7	34	7.541	1.025	1070.62	1432.3	540.5	89.9	1.019	0.99	1.004	0.014	0.995	0.019
9	35	7.041	1.025	1070.76	1433.1	540.8	90.1	0.997	0.98	1.000	0.046	0.977	0.019
11	36	6.514	1.025	1070.69	1433.2	540.9	90.0	0.997	0.98	1.001	0.047	0.977	0.020
13	37	6.056	1.026	1070.94	1433.5	541.1	90.1	0.997	0.98	1.000	0.047	0.976	0.021
15	38	5.531	1.025	1070.66	1434.1	541.2	90.2	0.996	0.98	1.001	0.049	0.976	0.020
17	39	5.041	1.025	1070.64	1433.3	540.4	90.1	0.988	0.97	1.001	0.061	0.970	0.023
19	40	4.540	1.025	1070.48	1432.6	540.5	90.0	0.995	0.98	1.000	0.049	0.976	0.017
21	41	3.038	1.026	1070.73	1432.5	540.7	89.9	0.986	0.97	1.000	0.065	0.968	0.020
23	42	3.056	1.025	1070.32	1431.9	540.3	89.8	0.981	0.96	1.000	0.071	0.964	0.020
25	43	3.056	1.025	1070.20	1430.9	540.0	89.6	0.983	0.97	1.000	0.069	0.969	0.019
27	44	2.526	1.025	1070.60	1431.1	540.1	90.1	0.988	0.97	1.001	0.064	0.969	0.019
29	45	2.039	1.025	1070.24	1430.7	539.0	89.9	0.942	0.96	1.000	0.071	0.965	0.018
31	46	1.537	1.025	1071.16	1430.9	540.2	90.1	0.948	0.97	1.001	0.063	0.969	0.017
33	47	1.036	1.026	1070.79	1431.1	540.1	90.0	0.989	0.97	1.001	0.060	0.971	0.017
35	48	0.537	1.025	1070.46	1431.4	540.0	90.1	0.947	0.97	1.001	0.063	0.969	0.015
37	49	0.076	1.025	1070.77	1431.7	540.3	90.1	0.949	0.97	1.000	0.060	0.970	0.015
39	50	-0.460	1.025	1070.52	1432.5	540.6	90.1	0.991	0.97	1.000	0.057	0.971	0.014
41	51	-0.961	1.025	1069.98	1432.2	540.2	94.8	0.989	0.97	1.000	0.059	0.971	0.014
43	52	-1.449	1.025	1064.79	1432.2	540.2	94.8	0.996	0.98	1.001	0.047	0.977	0.014
45	53	-1.965	1.025	1070.26	1432.7	540.6	99.8	0.999	0.98	1.000	0.043	0.979	0.012
47	54	-2.471	1.025	1069.49	1432.2	540.3	89.6	1.010	0.99	1.003	0.028	0.968	0.012
49	55	-2.966	1.025	1064.74	1431.6	540.8	94.8	1.000	0.98	1.001	0.041	0.980	0.011
51	56	-3.471	1.025	1070.02	1431.9	540.1	89.9	1.001	0.98	1.000	0.039	0.981	0.011
53	57	-3.979	1.025	1069.42	1431.5	539.9	90.0	1.001	0.98	1.001	0.039	0.981	0.002
55	58	-4.489	1.025	1070.25	1431.0	539.8	90.1	1.001	0.98	1.000	0.039	0.980	0.013
57	59	-4.976	1.024	1069.40	1430.9	539.6	90.1	0.998	0.98	1.000	0.044	0.978	0.011
59	60	-4.916	1.025	1070.51	1431.7	540.1	90.2	1.004	0.98	1.001	0.035	0.983	0.011

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TEST PAINT M-1106 ALPHABETIC  
1P-005 80 2.095 5.074 PUL -0.00 -1.31.19 5.401  
WIND TUNNEL SURVEY  
QUINN FIELD SURVEY SUMMARY

POINT	UP	AL	M	VH	PL	W	VL/VH	PL/VH	VL/VL	CML	VL/VM	PL/VM	VL/VM	AA/L	S/L	
1	25	-5.074	1.072	1.089.52	1.070.0	535.3	90.5	1.007	0.99	0.027	0.987	0.006	0.005	0.29	0.35	
2	25	-5.072	1.072	1.071.93	1.026.4	536.4	90.3	1.021	1.00	0.012	0.995	0.005	0.005	0.29	0.38	
3	25	-4.970	1.072	1.070.65	1.070.6	543.2	90.5	1.025	1.00	0.002	0.996	0.006	0.006	0.26	0.36	
4	25	-4.941	1.072	1.069.53	1.046.3	541.5	90.2	1.074	1.004	0.034	0.984	0.005	0.006	0.32	0.31	
5	25	-3.576	1.072	1.058.73	1.038.5	542.3	90.5	1.060	1.00	0.040	0.980	0.005	0.006	0.26	0.31	
6	25	-3.673	1.072	1.069.05	1.059.4	542.1	90.6	1.093	1.008	0.001	0.977	0.004	0.005	0.29	0.34	
7	25	-2.525	1.072	1.070.79	1.058.5	543.9	90.1	1.046	1.006	0.074	0.979	0.006	0.009	0.35	0.35	
8	25	-1.991	1.072	1.070.64	1.059.9	543.0	90.6	1.096	1.007	0.057	0.972	0.006	0.008	0.49	0.34	
9	25	-1.576	1.072	1.069.65	1.059.4	543.9	90.3	1.099	1.004	0.041	0.940	0.008	0.004	0.24	0.47	
10	25	-0.974	1.072	1.062.0	1.072.4	1.040.1	544.6	90.4	1.007	0.98	1.001	0.034	0.993	0.005	0.18	0.31
11	25	-0.560	1.072	1.070.14	1.059.4	542.5	90.6	1.045	1.001	0.065	0.968	0.006	0.003	0.14	0.36	
12	25	-0.077	1.072	1.070.36	1.059.5	542.9	90.4	1.049	1.001	0.059	0.971	0.005	0.001	0.08	0.32	
13	25	-0.521	1.072	1.070.72	1.059.6	543.0	90.4	1.078	1.001	0.077	0.962	0.002	0.001	0.04	0.11	
14	25	0.549	1.072	1.071.67	1.071.1	543.5	90.7	1.066	1.007	1.001	0.948	0.005	0.000	0.02	0.30	
15	25	1.071	1.072	1.070.97	1.070.5	543.2	90.6	1.095	1.007	1.001	0.967	0.007	0.001	0.00	0.40	
16	25	1.494	1.072	1.071.67	1.071.4	540.1	90.5	1.048	1.001	1.001	0.964	0.006	0.006	0.18	0.31	
17	25	2.005	1.072	1.071.72	1.071.4	540.9	90.6	1.087	1.001	1.001	0.969	0.005	0.005	0.23	0.32	
18	25	2.597	1.072	1.071.4	1.070.6	540.6	90.4	1.043	1.001	1.001	0.971	0.005	0.004	0.20	0.30	
19	25	3.067	1.072	1.071.52	1.071.0	540.0	90.5	1.040	1.001	1.001	0.976	0.005	0.007	0.39	0.33	
20	25	3.977	1.072	1.070.00	1.070.0	540.4	90.4	1.094	1.001	1.001	0.969	0.007	0.017	1.01	0.35	
21	25	4.518	1.072	1.069.79	1.070.5	540.2	90.2	1.095	1.001	1.001	0.967	0.007	0.001	0.00	0.37	
22	25	6.071	1.072	1.069.00	1.070.1	540.6	90.5	1.047	1.001	1.001	0.964	0.006	0.006	0.12	0.33	
23	25	5.566	1.072	1.064.9	1.064.9	540.5	90.5	1.046	1.001	1.001	0.966	0.005	0.005	0.23	0.32	
24	25	5.947	1.072	1.062.6	1.062.1	540.6	90.4	1.043	1.001	1.001	0.965	0.005	0.004	0.20	0.41	
25	25	6.677	1.072	1.062.4	1.062.3	540.1	90.4	1.040	1.001	1.001	0.966	0.005	0.007	0.33	0.37	
26	25	6.933	1.072	1.070.13	1.070.0	540.4	90.3	1.092	1.001	1.001	0.967	0.006	0.006	0.00	0.36	
27	25	7.570	1.072	1.065.79	1.070.5	540.1	90.6	1.047	1.001	1.001	0.951	0.005	0.005	0.24	0.37	
28	25	7.944	1.072	1.070.53	1.070.7	540.6	90.4	1.045	1.001	1.001	0.962	0.005	0.005	0.22	0.28	
29	25	8.476	1.072	1.070.53	1.070.3	540.4	90.5	1.046	1.001	1.001	0.956	0.007	0.007	0.28	0.41	
30	25	9.004	1.072	1.069.48	1.069.5	540.3	90.3	1.094	1.001	1.001	0.955	0.007	0.006	0.02	0.40	
31	25	9.570	1.072	1.069.2	1.069.2	540.4	90.4	1.092	1.001	1.001	0.954	0.006	0.005	0.00	0.35	
32	25	9.925	1.072	1.070.13	1.070.1	540.4	90.3	1.092	1.001	1.001	0.954	0.006	0.004	0.00	0.36	
33	25	9.925	1.072	1.070.00	1.070.0	540.5	90.2	1.017	1.001	1.001	0.991	0.006	0.006	0.01	0.36	
34	25	10.413	1.072	1.064.62	1.064.62	540.2	90.2	1.015	1.001	1.001	0.996	0.006	0.002	0.11	0.36	
35	25	10.574	1.072	1.062.5	1.062.5	540.3	90.5	1.027	1.001	1.001	0.992	0.007	0.002	0.13	0.39	
36	25	11.071	1.072	1.061.56	1.061.56	540.4	90.4	1.031	1.001	1.001	0.998	0.003	0.003	0.16	0.35	
37	25	12.055	1.072	1.061.56	1.061.56	540.5	90.5	1.005	1.001	1.001	0.998	0.004	0.005	0.35	0.32	
38	25	12.653	1.072	1.061.42	1.061.42	540.1	90.4	1.097	1.001	1.001	0.970	0.005	0.003	0.16	0.30	
39	25	13.091	1.072	1.061.36	1.061.36	540.5	90.5	1.090	1.001	1.001	0.963	0.006	0.006	0.37	0.37	
40	25	13.579	1.072	1.061.59	1.061.59	540.3	90.4	1.095	1.001	1.001	0.943	0.005	0.002	0.11	0.36	
41	25	13.962	1.072	1.062.22	1.062.22	540.6	90.5	1.091	1.001	1.001	0.949	0.006	0.006	0.47	0.38	
42	25	14.549	1.072	1.061.47	1.061.47	540.2	90.4	1.097	1.001	1.001	0.955	0.006	0.006	0.09	0.38	
43	25	15.061	1.072	1.061.56	1.061.56	540.1	90.5	1.095	1.001	1.001	0.957	0.007	0.007	0.01	0.38	
44	25	15.566	1.072	1.061.51	1.061.51	540.7	90.4	1.096	1.001	1.001	0.957	0.006	0.006	0.01	0.38	
45	25	16.061	1.072	1.061.51	1.061.51	540.3	90.5	1.096	1.001	1.001	0.957	0.007	0.007	0.01	0.38	
46	25	16.567	1.072	1.061.51	1.061.51	540.7	90.4	1.096	1.001	1.001	0.957	0.006	0.006	0.01	0.38	
47	25	17.061	1.072	1.061.51	1.061.51	540.4	90.5	1.096	1.001	1.001	0.957	0.007	0.007	0.01	0.38	
48	25	17.553	1.072	1.061.04	1.061.04	540.5	90.4	1.096	1.001	1.001	0.956	0.006	0.006	0.01	0.38	
49	25	18.051	1.072	1.061.12	1.061.12	542.3	90.5	1.096	1.001	1.001	0.957	0.007	0.007	0.01	0.39	
50	25	18.550	1.072	1.060.63	1.060.63	542.2	90.4	1.096	1.001	1.001	0.956	0.007	0.007	0.01	0.41	
51	25	19.051	1.072	1.061.51	1.061.51	542.1	90.5	1.096	1.001	1.001	0.956	0.007	0.007	0.01	0.38	
52	25	19.551	1.072	1.061.51	1.061.51	542.1	90.4	1.096	1.001	1.001	0.956	0.007	0.007	0.01	0.38	
53	25	20.057	1.072	1.061.51	1.061.51	542.1	90.5	1.096	1.001	1.001	0.956	0.007	0.007	0.01	0.38	
54	25	20.553	1.072	1.061.51	1.061.51	542.1	90.4	1.096	1.001	1.001	0.956	0.007	0.007	0.01	0.38	
55	25	21.056	1.072	1.061.51	1.061.51	542.1	90.5	1.096	1.001	1.001	0.956	0.007	0.007	0.01	0.38	
56	25	21.554	1.072	1.061.51	1.061.51	542.1	90.4	1.096	1.001	1.001	0.956	0.007	0.007	0.01	0.38	
57	25	22.051	1.072	1.061.51	1.061.51	542.1	90.5	1.096	1.001	1.001	0.956	0.007	0.007	0.01	0.38	
58	25	22.550	1.072	1.061.51	1.061.51	542.1	90.4	1.096	1.001	1.001	0.956	0.007	0.007	0.01	0.38	
59	25	23.059	1.072	1.061.51	1.061.51	542.1	90.5	1.096	1.001	1.001	0.956	0.007	0.007	0.01	0.38	
60	25	23.558	1.072	1.061.51	1.061.51	542.1	90.4	1.096	1.001	1.001	0.956	0.007	0.007	0.01	0.38	
61	25	24.057	1.072	1.061.51	1.061.51	542.1	90.5	1.096	1.001	1.001	0.956	0.007	0.007	0.01	0.38	
62	25	24.556	1.072	1.061.51	1.061.51	542.1	90.4	1.096	1.001	1.001	0.956	0.007	0.007	0.01	0.38	
63	25	25.055	1.072	1.061.51	1.061.51	542.1	90.5	1.096	1.001	1.001	0.956	0.007	0.007	0.01	0.38	
64	25	25.554	1.072	1.061.51	1.061.51	542.1	90.4	1.096	1.001	1.001	0.956	0.007	0.007	0.01	0.38	
65	25	26.053	1.072	1.061.51	1.061.51	542.1	90.5	1.096	1.001	1.001	0.956	0.007	0.007	0.01	0.38	
66	25	26.552	1.072	1.061.51	1.061.51	542.1	90.4	1.096	1.001	1.001	0.956	0.007	0.007	0.01	0.38	
67	25	27.051	1.072	1.061.51	1.061.51	542.1	90.5	1.096	1.001	1.001	0.956	0.007	0.007	0.01	0.38	
68	25	27.550	1.072	1.0												

TEST PAINT REFLUENT ALFAIR WING VI DT MIN SURVEY

TF-483 82 3671K 50747 PCT 16.16 0.0 5 403

WIND TUBE IELU SURVEY SUMMARY

DATE AEDC PROPULSION WIND TUNNEL  
0-14-77 TRANSONIC IAT

POINT NO	A1	V1	P1	W1	V1L/V1M	P1L/P1M	C1H	W1MM	V1MM	A1L	S1L
1	25	25.075	1.025	1.025	0.99	1.011	0.99	1.001	0.023	1.40	0.65
2	25	23.049	1.025	1.025	1.009	1.022	1.00	1.001	0.005	1.41	0.67
3	25	22.613	1.025	1.025	1.059	1.040	1.025	1.001	0.015	1.42	0.78
4	25	22.591	1.025	1.025	1.071	1.047	1.000	1.001	0.014	1.42	0.78
5	25	22.606	1.025	1.025	1.071	1.047	1.000	1.001	0.025	1.31	0.78
6	25	21.519	1.025	1.025	1.071	1.047	1.000	1.001	0.024	1.39	0.63
7	25	21.065	1.025	1.025	1.071	1.047	1.000	1.001	0.024	1.34	0.25
8	25	20.494	1.025	1.025	1.071	1.047	1.000	1.001	0.026	1.40	0.42
9	25	19.376	1.025	1.025	1.071	1.047	1.000	1.001	0.026	1.40	0.20
10	25	19.024	1.025	1.025	1.071	1.047	1.000	1.001	0.024	1.40	0.09
11	25	16.983	1.025	1.025	1.071	1.047	1.000	1.001	0.023	1.41	0.32
12	25	14.539	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.43	0.78
13	25	17.555	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.42
14	25	17.054	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.20
15	25	17.029	1.025	1.025	1.045	1.047	1.000	1.001	0.021	1.40	0.09
16	25	16.512	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.41	0.32
17	25	16.066	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.42	0.68
18	25	15.526	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.41	0.47
19	25	15.625	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.25
20	25	14.026	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
21	25	14.005	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
22	25	13.511	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
23	25	12.945	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
24	25	12.097	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
25	25	11.077	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
26	25	11.077	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
27	25	11.121	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
28	25	10.664	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
29	25	9.961	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
30	25	9.272	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
31	25	8.074	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
32	25	8.477	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
33	25	8.023	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
34	25	8.024	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
35	25	7.016	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
36	25	6.675	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
37	25	6.043	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
38	25	5.524	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
39	25	4.942	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
40	25	4.422	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
41	25	4.015	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
42	25	3.527	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
43	25	2.947	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
44	25	2.477	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
45	25	1.925	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
46	25	1.675	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
47	25	0.971	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
48	25	-0.476	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
49	25	-0.932	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
50	25	-0.523	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
51	25	-0.471	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
52	25	-1.057	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
53	25	-1.495	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
54	25	-2.446	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
55	25	-2.946	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
56	25	-3.192	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
57	25	-0.646	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
58	25	-0.476	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
59	25	-0.924	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09
60	25	-2.525	1.025	1.025	1.071	1.047	1.000	1.001	0.021	1.40	0.09

AEUC PROPELLION WIND TUNNEL  
TRANSONIC TEST

TEST PAIR REFLUX-ALFAH MIN-  
TP-645 81 3.011 5.017 \* PCT 14.16 1.00 5 403  
OUTEN FLOWFIELD SURVEY SUMMARY

POINT GP	X1	Y1	Z1	PT	T1	ML	VTL	PIL/PT	CPL	UT/VM	VT/VM	WI/VM	AAIL	SWL	
1 25	24.036	1.025	1070.38	1442.2	90.4	1.015	0.99	1.001	0.017	0.992	0.011	0.026	1.42	0.64	
2 25	23.494	1.026	1072.14	1441.7	544.5	90.7	1.021	1.00	1.001	0.009	0.996	0.011	0.024	1.39	0.62
3 25	22.967	1.027	1072.49	1433.2	543.6	90.4	1.021	1.00	1.000	0.009	0.995	0.010	0.024	1.38	0.57
4 25	22.531	1.026	1071.60	1436.9	542.4	90.6	1.025	1.00	1.000	0.002	0.999	0.014	0.024	1.38	0.61
5 25	22.076	1.025	1070.96	1434.5	541.3	90.5	1.020	1.00	0.999	0.007	0.996	0.009	0.023	1.32	0.52
6 25	21.426	1.025	1070.98	1433.2	540.8	90.4	1.091	1.05	0.998	0.000	1.052	0.023	1.28	-0.0	
7 25	21.013	1.025	1070.78	1435.5	541.5	90.7	1.128	1.08	0.999	-0.162	1.080	-0.006	0.023	1.24	0.33
8 25	20.503	1.024	1070.02	1436.3	541.6	90.2	1.124	1.08	0.999	-0.156	1.078	-0.008	0.023	1.22	-0.43
9 25	20.030	1.026	1071.73	1438.5	543.0	90.7	1.113	1.07	1.000	-0.137	1.069	-0.004	0.021	1.13	-0.21
10 25	19.462	1.026	1071.75	1439.3	543.5	90.4	1.095	1.05	1.000	-0.108	1.054	0.002	0.019	1.02	0.11

## C. PROPULSION WIND TUNNEL THAUMATIC-147

DATE  
4-14-11

TEST PANT REA10-6 ALPHAN 11/11/01 27 400 SURVEY  
F-645 60 3.005 11/11/01 11/11/01 5/1